GAS JOURNAL

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FUTURE OF DISTRICT ASSOCIATIONS

SUBJECT to terms and conditions there is substantial agreement among members of the District Associations that those bodies should become District Sections of the Institution of Gas Engineers. In the nationalised gas industry certain of the functions which some, at least, of the Associations have performed—the handling of commercial, price, marketing, and like problems—will be taken over by the Area Boards, but the need for a professional organisation to deal with technical matters—technical in the widest sense—will probably be greater than ever. Hitherto the Institution has drawn most of its income, *via* the British Gas Council, from several hundred separate gas undertakings. It may be assumed that the Gas Council and/or the Area Boards will continue to provide part of its finance, but the overall picture will be different, and there is sound reason why gas engineers today should seek to strengthen the Institution and consolidate its position. Most members of the District Associations are already in one grade or other of Institution membership, and with the exception of certain smaller bodies the District Associations are affiliated to the Institution. Affiliation gives an Association the right to appoint a member to serve on the Council of the Institution, but does not make that Association in any sense a branch of the Institution.

Many discusions have taken place, but, as the Institution President has stressed more than once, the Council will make no move in the matter unless and until requested to do so by the District Associations themselves. A summary of the points emerging from the discussions and of those on which there has been general agreement has been prepared by the Institution. The areas covered by the Associations are not coincident with those of the Area Boards. Since District Sections would in future be concerned largely with the provision of independent platforms for free discussion of technical matters it is agreed that it would be an advantage to include within a Section members from two or more of the Board areas ; in other words the District Sections should cover the present Association areas, with the possible exception of the Southern, which might conveniently be divided into two Sections corresponding with the existing Eastern and Western Districts. The question of the absorption of the present members of the District Associations into the Institution is a thorny problem, but it has been suggested that non-technical members might, at least for a limited period after the change-over, be admitted to Associateship without serious effect on the status of membership. After a limited period of grace, some form of membership of the Institution would be a prerequisite for membership of a District Section. It has been suggested that classes of membership of District Sections should be the same as those of the Institution and that an individual should belong to the same class of membership in both. Each District Section would have its own Management Committee, under a Chairman, responsible for organising meetings and generally conducting the affairs of the Section in the same way as the Presidents and Councils of the existing Associations, subject only to the general policy of the Institution ; each Section would also have a Secretary, Treasurer, Auditors, &c. Existence of District Sections would facilitate the discussion of technical papers submitted to the Institution and of other technical matters for which insufficient time is available at the Institution's general and autumn research meetings, and should generally lead to a stronger feeling of participation in the Institution affairs on the part of members of every class.

District Sections could be financed either by direct subscriptions, distinct from subscriptions to the Institution, or by an annual payment from the Institution calculated on the membership of the Section. In the latter case the standard rate of subscription to the Institution would have to be raised by an amount roughly equivalent to the present membership subscriptions of the Associations, and members of sections would pay their subscriptions direct to the Institution. Opinion is divided between the two methods. Representatives of District Associations favour the former method, but members of the Council of the Institution, advocating that every member of the District organisation should also be a member of the Institution, would prefer the latter method, which, incidentally, is the one adopted by other professional Institutions having local Sections. A difficulty might arise under the second method if some only of the District Associations were to become Sections of the Institution.

No scheme could be regarded as complete unless it provided a place and status for the Junior Associations. Up to now this aspect of the question has been less fully considered than that of the District Associations, and if progress is to be made the views of the Junior Associations themselves must be ascertained and considered as an early step. It may conceivably happen that the work of the Junior Associations will in the future become more closely linked with educational and training schemes of the industry established under the Gas Act, in which event a considerable modification of their set-up would appear probable. The Institution Council is equally concerned for the well-being of the Junior Associations as for the District Associations, and hopes that the latter, in discussing possible modifications in their own constitutions will also give consideration to the future of their own affiliated Junior Associations.

So far as the Eastern District of the Southern Association is concerned—the first to discuss the matter in public and reach a decision—the meeting last week unanimously decided to endorse the recommendation of the Council of the main Association that application should be made to the Institution for incorporation as a District Section or Sections of the Institution, 'subject to agreement regarding terms and conditions.'

SALESMANSHIP UNDER NATIONALISATION

THE future status of the salesman and the Gas Salesmen's Circles was the principal subject under discussion at the recent Salesmen's Day conference, but although certain general statements were made at that gathering, little was disclosed concerning the relationship existing between an Area Board and the sales organisations within its province. It was therefore with considerable interest that we learned of some of Mr. C. H. Chester's plans regarding salesmanship and kindred matters. The occasion was the annual dinner of the Home Counties (Western Area) Gas Salesmen's Circle, held at Swindon on March 30, at which Mr. Chester revealed his interest in and his determination to further the activities of the salesmen in his area.

It was very necessary, he said, that area boundaries affecting associations—including the Juniors and the Circles—should not be drawn too tight; it was vital that people should be able to meet and hear changes of opinion. For that reason, he explained, 'I will do the utmost in my power to assist the salesmen in their deliberations and to enable them to meet and take part in as many activities as possible, for it is a matter of vital necessity that these social functions be preserved.' Referring to the manner in which salesmen would fit into the new organisation, Mr. Chester said that he had had a discussion with his contemporary Chairman on the Electricity Board, and they had agreed that the only thing left to the consumer was the existence between them of a live and active competition. For this reason the future salesman would be better placed and on surer foundations, but it was necessary that he adjust his outlook slightly. The Circles, which were voluntarily supported, openly and in varying degrees, would have to organise themselves towards a greater standard of proficiency; if they did that, the Area Boards, when considering matters of salesmanship and publicity, might be expected to contact the Circles for assistance. In the event of such a position, it was necessary for the salesmen to possess higher qualifications, and for this reason he heartily endorsed the proposal submitted by certain Circles urging that entry to Circles should be more carefully scrutinised. The Institution scheme, in which Mr. J. H. Dyde had played a considerable part, indicated how this might be accomplished.

It was very important that the cloud under which the electricity industry laboured should not lull the gas industry into a sense of false security. Mr. Chester anticipated increasingly fierce competition, and gave warning that their present false position would be short lived. In the stiff fight ahead it was essential that the ladies should take their part in the instruction of the housewife. 'I should like to see a wider interpretation of the term Home Service Adviser,' he said, 'so that cooking becomes only one specialist branch of their work, which should embrace all applications of gas and coke as domestic fuels.'

Mr. Chester then gave, in general terms, an impression of how he is tackling the organisation of his Area. Having formulated a policy statement (in which consumer service and salesmanship played an important part), every effort had been made to 'break down' the whole into manageable parts. 'I am most anxious to decentralise,' he explained, 'so that everyone knows his chief, to whom he can appeal and make representations.'

The 300 square mile area was split into 11 divisions, very largely autonomous, each with its own manager, who would be in close contact with his fellows to discuss purchasing and sales policy. The sub-divisional managers would each have a distribution engineer, production engineer, and commercial assistant. Thus sales would play a prominent part, and a promotional chart would indicate the opportunities open to all salesmen in their own area; the sales policy itself being framed at the lowest level. Salesmen would, however, require definite qualifications to fit them for prominent positions. 'I have been in many undertakings in my time,' said Mr. Chester, 'and have been appalled by the treatment meted out by the people behind the counter. There will therefore have to be a watchdog in the Gas Consumers' Council, but this will, I assure you, operate only in the right spirit.' Concluding, Mr. Chester said, 'I hope the Circles will be happy in their work in the future, and will be able to put their suggestions, without difficulty, to the Area Gas Boards and the Gas Council.'

GAS WATER HEATER CAMPAIGN

The American gas industry is to launch next month an ambitious million dollar publicity campaign for the sale of automatic gas water heaters. It will be opened by a four-colour, two-page advertisement by the American Gas Association in the *Saturday Evening Post*, and will be followed by additional four-colour pages in national magazines. The Gas Appliance Manufacturers' Association, gas utility companies, gas water heater manufacturers, distributors, and dealers will also share in the project, which will continue throughout the spring and autumn. The *Canadian Gas Journal* justifiably makes this comment: 'And yet some gas men think the gas industry is on the downgrade.'

GAS SALES IN AMERICA

The American Gas Association's Bureau of Statistics reports that last January's sales of the gas utility industry to ultimate consumers were 8.9% higher than sales during the same month last year, increasing from 3,205 million therms to 3,490 million therms. Sales of natural gas were up 12.6%, while manufactured and mixed gas sales declined 10.5% and 21.8%, respectively. The Association's January index of total gas utility sales is 244.5 (1935-1939=100). Total sales of gas for the 12 months ended Jan. 31 were 33,166 million therms, corresponding to an increase of 11.6% when compared with sales of 29,707 million therms in the same period a year earlier. Natural gas sales rose 14.4%, while sales of manufactured and mixed gas were 0.5% and 17.5% lower, respectively.

COAL OUTPUT UP

British miners achieved the highest post-war overall output per manshift in the week ended Mar. 12—1.18 tons compared with 1.16 tons for the previous week. Output per manshift at the face also increased from 3.01 tons to 3.04 tons in the same period. Total production for the week ended Mar. 19—4,351,200 tons—was 20,300 tons higher than the previous week, 42,400 tons more than in the corresponding week of last year, and the highest since the week ended Dec. 18, 1948. Deep-mined coal production (4,112,100 tons) was 16,000 tons less than the previous week, but open-cast production (239,100 tons) was up by 36,300 tons. At the same time voluntary absenteeism showed a slight decrease, from 7.46% to 7.33% among faceworkers, and from 5.84% to 5.79% among all workers, compared with 7.97% and 5.98% in the corresponding week last year.

POZNAN INTERNATIONAL TRADE FAIR

In pre-war days the International Trade Fair of Poznan was one of the biggest and best known commercial institutions in Europe. Poland, badly hit during the war, is once more taking its place among the leaders of trade and commercial connections in Europe. This year the XXII Fair regains its pre-war splendour in a completely reconstructed pavilion; the original one was destroyed during the war. The *Gas Journal* is taking its place among the 2,000 exhibitors for the first time in its 100 years' history. We are participating in it because we feel we have a job to fulfil; the job of sending our highly specialised and highly technical word over the world so that we too can play our part in every way in the job of reconstruction and expansion. Poland has suffered from the war as much as anyone, and suffered at the hands of two great fighting machines. Our pages will be of great assistance to our Polish colleagues, to whom we extend good wishes.

GAS COMPANIES' FOREIGN INVESTMENTS

The Minister of Fuel and Power has issued the Gas (Investment and Information) Regulations, 1949 (Statutory Instruments, 1949, No. 568), which came into force on Mar. 31. Part I of the regulations prescribes the time limit within which gas companies, other than ancillary gas undertakers, are to supply particulars of

their foreign investments (defined as assets the transfer of which is governed otherwise than by the law of any part of Great Britain). Each company is required to take immediate steps to assign its foreign investments to the Area Board in whom the company's property will vest, or to a nominee or purchaser specified by that Board. In the case of composite companies, the requirement is limited to foreign investments apportioned to the Board under section 18 (5) of the Act. Part II provides that persons who are or may be undertakers to whom Part II of the Act applies are, on certain terms, to produce such books of account, records and documents, to supply such copies or extracts, and to furnish such other information, as the Minister of Fuel and Power, any Area Board or the Gas Council may reasonably require for any of the purposes specified in section 38 of the Act. Such persons are also, on certain terms, to provide facilities for the taking of copies or extracts, and the verification of information. Area Boards and the Gas Council are required to produce books, records and documents required by persons who are or may be parties to arbitrations arising out of the disclaimer of agreements or leases or the making of claims against directors, and to provide certain facilities. Where such books, records or documents are in the possession of certain other persons, similar obligations are imposed upon them. Provision is made for payment of expenses, and for penalties in case of non-compliance or obstruction.

CO-PARTNERSHIP UNTIL 1951

Co-partnership schemes for 54,000 workers in 58 gas companies are to be continued until Mar. 31, 1951, although the industry will be taken over by the State on May 1 this year. An order to this effect was issued on Mar. 24 by Mr. Gaitskell, Minister of Fuel and Power, under the Gas Act. Workers will be entitled to an annual sum equal to the average payments in the last three complete years before vesting day, or to the payment in the last of those years for which a payment was made, whichever is the greater. In addition, the Area Board concerned is to make a payment in respect of the last complete year before the vesting date in any case where such a payment would have been made but for the vesting date supervening. No new members are to be admitted after the vesting date, other than employees who had already acquired a prospective right to admission on the fulfilment of a condition which is not fulfilled until after that date; members are not to lose their membership rights by reason of involuntary transfer to other employment under the same Board. Persons concerned with the management of a scheme, who were appointed by the undertaker in his capacity as employer, cease to hold office six months after the coming into operation of the regulations, unless confirmed in their appointment by the Area Board concerned. Questions arising as to the application of the regulations to any scheme may be referred, by the Area Board concerned or by the managers of the scheme, to arbitration under the Act. Capital held by co-partners is about £4,500,000, and the total bonus paid is approximately £500,000 a year, equivalent to 5.4% of wages. The National Union of General and Municipal Workers, which caters for gas workers, had pressed for the winding up of co-partnership schemes after vesting date and the distribution of assets.

Personal

Mr. S. G. DEAVES, formerly Manager of the Northern Mechanical Sales Division of the British Tyre and Rubber Company, at Leyland, has been appointed Belting Sales Manager operating from Head Office (Herga House, Vincent Square, London, S.W.1). Mr. G. W. WILLIAMS has been appointed Northern Manager of the Industrial Sales Division, operating from Leyland.

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Following the appointment of Mr. R. S. Snelling, Director, General Manager and Secretary of the Newport Gas Company, to the position of Deputy Chairman of the Wales Gas Board, Mr. JOSEPH F. RUST, Chief Engineer of the Company, has been appointed General Manager and Engineer. Mr. Rust is a past-President of the Wales and Monmouthshire Association of Gas Engineers and Managers, Council member of the Institution of Gas Engineers, and a member of the Institute of Fuel. During the war years he was Chairman of the Gas Engineering Advisory Board for Wales, and in 1946 was appointed Chairman of the South Wales Gas Grid (Eastern Area) Working Committee. Mr. A. H. DYER, Deputy Engineer, has been appointed Deputy General Manager and Engineer; Mr. A. H. CANE, Accountant, has been appointed Secretary; and Mr. E. J. COKE, Assistant Accountant, has been appointed Assistant Secretary.

A CENTENARY . . .

FAR and wide, at home and overseas, it is known in gas circles that 1949 marks the Centenary of the *Gas Journal*. The first issue was dated February 10, 1849, and since then 256 volumes have faithfully recorded, and added much to, the progress of a live, an epoch-making, industry.

We celebrate our great event by presenting a Souvenir Volume to all subscribers to the *Journal*. The book extends to 248 pages. The whole of the text is original matter, and we venture to hope that it will live long in the records of the industry. The advertisement section reaches a new plane in presentation and utility.

Distribution will begin this week. The majority of copies will be despatched by post from Leicester; multiple subscribers receiving copies in parcels of not more than four. Some Metropolitan subscribers will receive their copies by hand delivery. Regular buyers through the Trade will have their copy attached to an early issue of the *Journal*.

Extra copies are available at 21s. each, post free.

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Mr. J. F. MILLAR, Chairman of the Stirling Gas Light Company, has been presented with a silver salver, bearing the facsimile signatures of the eight Directors of the Board, to mark the dissolution of the Company prior to nationalisation.

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Retirement of Mr. David Fulton

Mr. DAVID FULTON, Engineer and Manager of the Helensburgh Gas Department since 1915, has tendered his resignation to the Town Council. During his long period as Manager he has had many difficulties to surmount, but never has he failed to maintain an adequate supply; the extended and improved plant has reached the full capacity of its production. The price of coal advanced enormously since he took over, and, in recent years its quality has sadly deteriorated and added to the difficulties of production. Notwithstanding the introduction of electricity to Helensburgh, the consumption of gas has continued to increase to a remarkable degree, and the consistently low price which has been charged to the consumer reflected credit upon the management. In 1936 it was as low as 1s. 11d. per 1,000 cu.ft. When the works were purchased in 1899 by the Council they cost £31,000, and since then the total outlays have been over £70,000.

Mr. Fulton joined the staff of the Gas Department on April 22, 1912. His resignation takes effect from May 1, after which date he will take up an appointment as part-time member of the Scottish Gas Board. Mr. Fulton has played a prominent part in affairs of the gas industry for years. At present he holds office as Chairman, British Gas Council (Scottish Section), and is representative for Scotland on the Executive Committee of the British Gas Council. Since the death of Bailie Wm. Elger, Glasgow, in November, 1946, he has been Chairman of the Federation of Gas Employers in Scotland, and of the Regional Joint Industrial Council. He is also a member of the National Joint Industrial Council for the Gas Industry. During the war he was Vice-Chairman for the Gas Engineering Advisory Board set up by the Ministry of Fuel and Power. He was President of the North British Association of Gas Managers in 1930, and Waverley Association of Gas Managers in 1939. Mr. Fulton received his training at the Dawsholm Gasworks of the Glasgow Corporation.

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Mr. C. R. TROTTER, formerly Engineer and Manager of the Kennoway and Largo Gas Company, has been appointed Technical Representative of Tully, Sons and Co., Ltd., for Scotland and the North of England.

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Mr. GEORGE WRIGHT, M.I.MECH.E., M.INST.GAS E., Lincoln City Gas Engineer and Manager, who would have retired on Mar. 31, has agreed to continue until vesting date, May 1. Mr. Wright has been with the Department for 19 years.

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Mr. H. P. ALLISON, Engineer and Manager of the Redcar Gas Department, has been appointed a member of the Darlington Divisional Management Committee under the Northern Gas Board. His name was accidentally omitted from the list published last week.

* * *

Mr. A. H. BARRINGTON, Senior Technical Assistant to Stretford and District Gas Board, has been appointed Assistant Works Engineer to the Board. Prior to taking up his appointment at Stretford in 1946, Mr. Barrington was Chief Works Assistant at the Burton-on-Trent Gas Department.

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The Department of Scientific and Industrial Research has announced the following appointments to the Fuel Research Board:—Dr. R. HOLROYD (Research Manager, Billingham Division, I.C.I., Ltd.), Sir CHARLES ELLIS, PH.D., F.R.S. (Scientific Member of the National Coal Board), and Sir CYRIL HINSHELWOOD, SC.D., F.R.S. (Professor of Chemistry, Oxford University).

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Mr. V. O. ALLBUTT, Engineer of Saltley Works, and Mr. H. LOWE, Constructional Engineer, have retired from their positions with the City of Birmingham Gas Department after a period of over 40 years' service. Mr. F. J. BENGOUGH, Assistant Engineer of Saltley Works, has been appointed to succeed Mr. Allbutt, and Mr. J. H. HALLIDAY, Senior Draughtsman, has been appointed Constructional Engineer.

Obituary

Mr. ARTHUR H. CRANMER, former Chief Engineer of the Wolverhampton Gas Company, died at his home on Mar. 27 at the age of 74. A member of the Institution of Gas Engineers and a past-President of the Midland Association of Gas Engineers and Managers, Mr. Cranmer retired from Wolverhampton in 1945 after 43 years' service with the Company. He was trained by his father, the late Mr. J. S. Cranmer, Chief Engineer and General Manager of the Stratford-on-Avon Gas Department, and was later with the Lea Bridge Gas Company. He left Lea Bridge to become Works Superintendent at Wolverhampton in 1902, and was promoted to the position of Chief Engineer in 1929. His brother, Mr. W. G. S. Cranmer, is Director and Secretary of the Willenhall Gas Company.

1949 "JOURNAL" DIRECTORY

In order to keep the Directory information up to date, the following alterations and corrections which have been notified during the past month should be noted in the 1949 issue of the *Gas Journal Calendar and Directory:*

Page 16.—BROMSGROVE: F. J. Edmonds, *E & M*, vice J. S. Bird.
" 34.—HARTLEPOOL: Delete J. R. Bradshaw, *E, M & S.* F. J. Webster, *E & GM.* G. D. Spaldin, *S.*
" 44.—LEEDS: P. Sumner, *Asst E & GM.*
" 50.—MARTOCK: J. S. Bird, *E, M & S*, vice F. N. Skinner.
" 68.—SOUTH BANK: Delete R. H. Duxbury, *D, E, M & S.*
" 68.—SOUTHPORT: L. G. Roberts, *Dep E*, vice P. Sumner.
" 82.—WINDERMERE: G. R. Spence, *E & M*, vice J. N. Leckie, retired.
" 84.—WORCESTER: Delete G. P. Mitchell, *MD & CE.*
" 92.—KENNOWAY: D. M. Kerr, *E & M*, vice C. R. Trotter.
" 94.—MELROSE: Delete D. M. Kerr, *E & M.*
" 139.—GAS CONSOLIDATION, LTD.: Delete G. M. Gill, *Director.*
" 140.—SEVERN VALLEY GAS CORPORATION, LTD.: Delete G. M. Gill, *Director.*

Appointments

East Midlands Gas Board

The East Midlands Gas Board has made the following appointments:—

Deputy Chief Accountant.—Mr. ROBERT THOMPSON (Secretary and Accountant—Bilston Gas Light & Coke Company).

Divisional Accountants.—Mr. C. H. PLUMTREE (Chief Accountant, Sheffield and District Gas Company); Mr. F. A. BARRETT (Chief Accountant, Derby Gas Light and Coke Company); and Mr. C. A. BRAIN (Accountant and Assistant Secretary, Northampton Gaslight Company).

North Thames Gas Board

The North Thames Gas Board has appointed Dr. JAMES BURNS, G.M., B.SC., PH.D., M.INST.F., M.INST.GAS E., now Deputy Chief Engineer to the Gas Light and Coke Company, to be Chief Engineer to the Board with effect from May 1. Dr. Burns started as a Chemist in 1929, having been educated at Aberdeen University and King's College, Cambridge. In 1930 his services were lent to Chemical Reactions, Ltd., and he spent two years on behalf of that Company in Germany. In 1941 he was transferred to the engineering side and appointed Acting Deputy Station Engineer at Bromley; shortly afterwards he was awarded the George Medal for conspicuous service during an air raid. In 1943 he was appointed Station Engineer, Stratford, in 1946, Group Engineer in charge of Beckton and Southend, and in 1948, Deputy Chief Engineer.

Letters to the Editor

Nationalisation and Individuality

DEAR SIR,—I have not troubled your columns for some considerable time, but I should like to make a final contribution before leaving the industry in which I have worked for over a quarter of a century.

Your leader of Mar. 23, under the above heading, indicated that it was a defeatist attitude of mind to express a fear (as certain engineers and other officials have done) that individuality and a sense of personal responsibility would be suppressed under nationalisation.

Surely that is unfair. No one should be called over the coals for having the courage to face inescapable truth. It seems not yet to be fully understood that any industry administered by the State is bound by the fact of that administration or ownership to become less efficient, because the one real foundation of efficiency

—*i.e.*, accountability—has to all intents and purposes, been removed. Broadly speaking, no one is ever made accountable for blunders, mis-management, or incompetence; the buck is nearly always passed successfully to somebody else and rarely does anyone pay the penalty for ineptitude. In addition, a false belief is held by many that the State can afford all sorts of expenditure which individual enterprise is unable to face. This induces the feeling that costs are of no importance and so laxity is encouraged.

In the life of a nation, decisions and policies of today are only of real importance in so far as they determine the nation's future. Not the future of tomorrow, but the future of 10, 20, or 50 years' hence. It is the long-term view, the vision of what will flow from today's actions, that is the hall-mark of statesmanship and leadership; and if that vision is clouded or distorted no subsequent tears can wash out the inevitable results.

There is far too much bitterness and rancour in the world today for me to wish to add one iota to it. I am much consoled by unsolicited letters from friends and strangers who have written to me to express their gratitude for my attempt (unsuccessful as it happens) to put heart into the industry to fight to maintain its complete independence under statutory regulations as distinct from a State ownership. It might be argued that the real defeatism lay in high places when nationalisation was first propounded. Yet who can help but feel sorrow and a sense of hopelessness that the spiritual principle behind the great co-partnership movement, for which the gas industry has made itself famous, should have been of so little moment to those who now rule the nation's destinies that they have set out deliberately and wantonly to destroy it. Some form of monetary compensation for financial loss suffered has been promised, but the real content, the building up of a property-owning democracy through identification of the prosperity of the worker with the prosperity of the undertaking in which he works and the prosperity of the shareholders who provide the capital, will have been obliterated for ever.

Nationalisation is the political instrument of a philosophy which abominates excellence and outstanding quality in the individual. Surely that should be quite clear by now. I fear, therefore, that Gas is bound to follow the Post Office, Coal, Electricity, and Nationalised Medicine, and a nation which was famed throughout the world for its particular characteristic of pre-eminence will have doomed itself to a grim acceptance of everything that is second or third rate.

Yours faithfully,
HYDE C. BURTON.

5, Great Winchester Street,
Old Broad Street, London, E.C.2.
March 28, 1949.

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'Still Working'

DEAR SIR,—Perhaps some of your readers may be interested to know of a gas engine that is still working every day of the week at Cockermouth although it was installed in 1894. The engine was built by Messrs. Tangyes, Ltd., Smethwick, and is of the Otto principle (Pinkney's patent) and develops 5 B.H.P. It is used for driving a three throw ram pump to force water to a higher constant level; hence there is no governor on the engine, the speed being controlled by a cock on the gas supply pipe.

The engine and pump were ordered on April 10, 1894, and by May 4, 1894, the order had been completed. Considering the weight and size of the combined plant, it would be regarded a miracle these days if similar service could be obtained.—Yours faithfully,

R. NORGATE,
Gas Engineer and Works Manager.

Gasworks, Cockermouth.
March 24th, 1949.

Diary

April 7.—**Midland Junior Gas Association:** President's Day at Birmingham. Afternoon visit to Stechford works of Parkinson Stove Co., Ltd.

April 8.—**London and Southern Junior Gas Association:** 'Some Random Thoughts on Gas Distribution Practice.' M. E. Lee. Edgware Road Office, Gas Light and Coke Company, 7 p.m.

April 9.—**Scottish Junior Gas Association (Eastern District):** Short Paper Day at Dunfermline.

April 12.—**National Federation of Gas Coke Associations:** General Committee. Gas Industry House, 10 a.m.

April 12.—**British Gas Council:** Central Board, Gas Industry House, 2.30 p.m.

April 21.—**Southern Association of Gas Engineers and Managers:** Meeting at Exeter.

April 22.—**Northern Junior Gas Association:** 'A Theoretical and Practical Study of the Removal of Hydrogen Sulphide from Coke Oven Gas.' T. R. Wicks. Darlington Gas Works.

INTERNATIONAL GAS UNION

The following is the programme arranged for the 4th International Gas Conference, which, under the Presidency of Colonel C. M. Croft, D.L., J.P., will be held at the Institution of Civil Engineers, London.

WEDNESDAY, JUNE 15

10 a.m. Meeting Hall A—General Session.
Official opening by the Minister of Fuel and Power.
Announcement of President elected by Council for 1949-52.

10.30 a.m. to 12 noon Meeting Hall A—Sectional Session.
(*a*) French Report: 'Quels sont les meilleurs procédés pour parer aux pointes d'émission, par exemple, au moment des baisses de température qui provoquent des consommations excessives?'
(*b*) British Report: 'Methods of maintaining the output of gaseous therms in times of restricted gas supply.'
(*c*) Paper: 'The characteristics of gas-making plant to meet the seasonal heating load,' by F. M. Birks, C.B.E., Deputy Chairman, North Thames Gas Board.

Meeting Hall B—Sectional Session.
(*a*) British Report: 'Methods of maintaining a gas supply, particularly to priority consumers, in times of gas shortage.'
(*b*) Paper: 'Modern protection methods for cast iron and steel pipes, and the experience gained with these methods in the Netherlands,' by Dr. J. E. Carrière, Manager, Keuringsinstituut voor Waterleidingartikelen (K.I.W.A.).

1.45 to 6 p.m. Visits by motor coach to (*a*) Beckton Gasworks; (*b*) Ponders End Gasworks (Tottenham); (*c*) the Cadby Hall establishment of J. Lyons & Co., Ltd.; (*d*) the Greenwich works of G. A. Harvey & Co. (London), Ltd.

2 to 6 p.m. Ladies' tour of London, by motor coach, followed by tea, at the invitation of Mrs. C. M. Croft, at Grosvenor House, Park Lane, W.1.

8.30 p.m. Reception by H.M. Government.

THURSDAY, JUNE 16

9.30 a.m. to 12 noon Meeting Hall A—Sectional Session.
Presentation and discussion of:
(*a*) French Report: 'Détermination du pouvoir calorifique optimum.'
(*b*) French Report: 'Du choix d'un type de fours.'
(*c*) Paper: 'Un projet d'absorption et de récupération du monoxide de carbone du gaz de ville,' by Dr. Hs. Deringer, Directeur, Usine à Gaz, Winterthour.

Meeting Hall B—Sectional Session.
Presentation and discussion of:
(*a*) Paper: 'A study of progress in the domestic utilisation of gas,' by A. R. Bennett, M.SC., Research Manager, Radiation, Ltd.
(*b*) Paper: 'Développement des brûleurs pour appareils à gaz domestiques,' by H. Zollikofer, Secrétaire Général, Société Suisse de l'Industrie du Gaz et des Eaux.
(*c*) Paper: 'A comparison between the simplex and the duplex burner,' by J. G. de Voogd, Director, Gas-Stichting, Netherlands.

12.30 p.m. to 6.30 p.m. Visit, by motor launch, on the River Thames, to the Dagenham works of the Ford Motor Company, Ltd.

2 to 6 p.m. Visits, by motor coach, to (*a*) Wandsworth Gasworks; (*b*) the Wembley Glass and Lamp Works of the General Electric Co.

2 to 6 p.m. Ladies' visit, by motor coach, to Lullingstone Castle and Silk Worm Farm.

8 p.m. for 8.30 p.m. Banquet at the Dorchester Hotel, Park Lane, W.1.

FRIDAY, JUNE 17

9.30 a.m. to 12 noon Meeting Hall A—Sectional Session.
Presentation and discussion of:
(*a*) United States of America Report: 'Gas industry research in the United States of America.'
(*b*) Paper: 'La Recherche Gazière en France,' by M. le Professeur G. Ribaud, Membre de l'Académie des Sciences, Directeur des Etudes et Recherches de Gaz de France.
(*c*) Paper: 'Research in the British gas industry,' by Dr. J. G. King, O.B.E., Director, Gas Research Board.
(*d*) Paper: 'Quelques aspects de la valorisation chimique des gaz de houille en Belgique,' by Dr. Paul Ferrero, Directeur des Recherches de la Société Carbochimique S.A.

Meeting Hall B—Sectional Session.
Presentation and discussion of:
(*a*) Belgian Report: 'Les statistiques européennes de l'Industrie du Gaz.'
(*b*) British Report: 'Some factors controlling the demand for gas.'
(*c*) Paper: 'Etablissement d'une tarification rationnelle du gaz,' by P. Fleurquin, Président, Comité de Coordination Gaz-Electricité à Electricité de France.
(*d*) Paper: 'Present and future problems in coke oven gas supply in Western Germany,' by H. D. Greenwood, M.SC. (Assistant Director of Carbonisation, National Coal Board; lately Director of Public Utilities, Control Commission for Germany), and W. R. Branson, M.SC. (lately Assistant Director of Public Utilities, Control Commission for Germany).

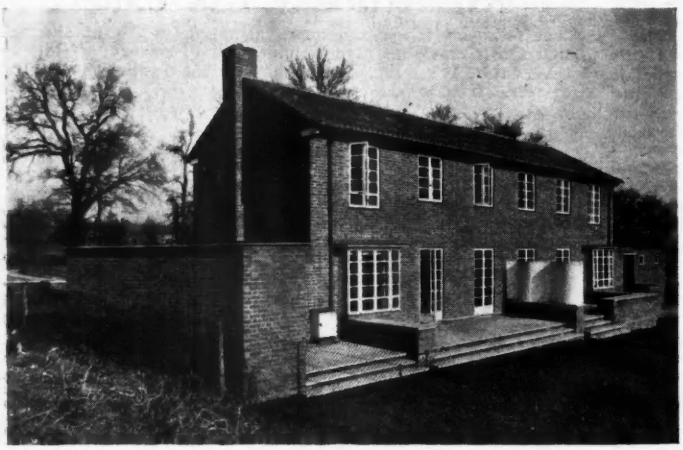
3 to 4.30 p.m. Meeting Hall A—General Session.
Presentation and discussion of:
(*a*) Paper: 'La Formation Professionnelle Gazière en France,' by F. Prégermain, Président, Association Technique de l'Industrie du Gaz en France.
(*b*) Paper: 'Technical education for the gas industry in Great Britain,' by Dr. P. C. L. Thorne.

4.30 p.m. Closing business.

1.45 p.m. Ladies' visit, by motor coach, to Kew Gardens.

7 p.m. Evening visits to:
(*a*) Performance of the opera 'Pelléas et Mélisande' (Debussy), by the Paris Opera, at the Royal Opera House, Covent Garden.
(*b*) Private showing of gas industry and other films.

On June 18 there will be whole-day excursions to (*a*) Cambridge (by train); (*b*) Hampton Court Palace and Windsor Castle (by motor coach). Week-end excursions (by train and motor coach) to (*a*) Shakespeare country and the Cotswold Hills; (*b*) North Wales coast and Snowdonia have been arranged for June 18-20



WHOLE-HOUSE HEATING

AN IMAGINATIVE SOCIAL SERVICE

The south elevation of the Stanmore houses overlooks the gardens. Inside, the solid fuel cabinet heater is burning coal with a notable absence of smoke.

AT Stanmore, Middlesex, Radiation, Ltd., have built and equipped two houses which introduce in practical form a new conception of whole-house heating coupled with the provision of an ample supply of hot water, the entire scheme conforming with rigid standards of fuel economy.

We were privileged last week to see at first hand what Radiation, Ltd., have accomplished, and we were impressed with what we believe to be an important contribution to the amenity of the community. All interested in housing and health—from the Government Departments concerned, through the architect and the builder to the householder and the housewife—should make themselves acquainted with this far-seeing development.

Radiation, Ltd., have developed three appliances—the gas cabinet heater, the gas chimney furnace, and the solid fuel cabinet heater for their house-warming systems. The space heating rating of all three is 30,000-35,000 B.Th.U./hr. and they are therefore capable of providing full heating up to 65° F. in houses and flats up to 1,500 sq. ft. floor area, or background heating to 55°-60° F. in somewhat larger dwellings when these are insulated according to the Egerton standards.

Additionally, the solid fuel cabinet heater will supply 50 or more gallons of hot water at 140° F. per day, and the New World R.12/20 low-consumption gas storage water-heater is used in conjunction with the gas house-warming appliances for providing the domestic hot water supply.

Both gas-operated units are suitable for new housing, but the gas cabinet heater may in addition be used in existing houses. We publish a photograph of the gas chimney furnace as installed in Stanmore House No. 1.

These heaters are of simple design and consist of :—

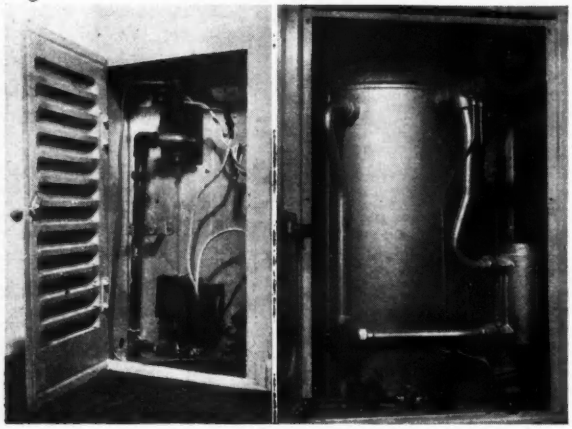
1. A heat exchange unit of heat-resisting steel.
2. An outer casing of steel (the chimney furnace casing may alternatively be constructed in brick).
3. A gas burner, with pilot and safety flame-failure device.
4. An electric fan for forced circulation of warm air to rooms.
5. A room thermostat to control the gas valve and the fan and therefore the output of warm air.
6. A limit control to prevent overheating and damage to the heater.
7. An air filter.

These gas-operated heaters virtually require no day-to-day attention whatsoever. The only manual operation required in their case is the setting of the room thermostat.

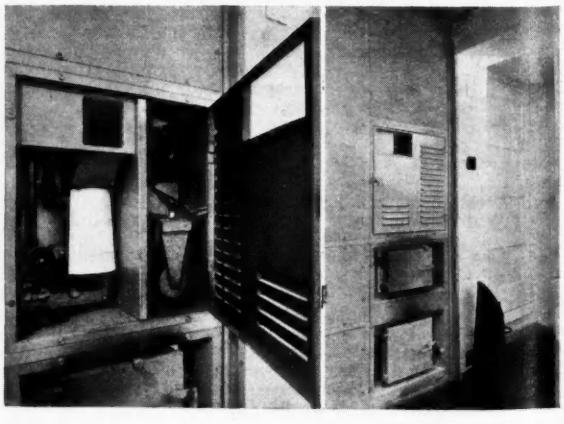
A solid fuel cabinet heater was installed in Stanmore House No. 2 and we also give an illustration of this unit. It consists of a very well insulated cabinet containing :—

1. A solid fuel down-draught furnace, suitable for consumption of any domestic fuel, including household coal, which it burns almost smokelessly.
2. A heat exchanger to extract the heat from the flue gases before they pass into the chimney.
3. A 45-gall. hot water cylinder heated in an original and simple manner by both convection and radiation from the furnace and the heat exchanger.
4. A fan and air filter unit to circulate clean, warm air.
5. A gas-heated circulator for thermostatically-controlled summer water heating, an economy valve being provided to offer either 5 or 25 gall. storage.
6. A thermostat to control the combustion rate of the furnace to give the required output for space and/or water heating.
7. A motorised damper which is operated by a room thermostat to give controlled space heating.

The control of this unit is completely automatic. Three manual operations only by the householder are necessary : the periodical re-charging of the furnace ; the very occasional emptying of ash ; the setting of the room thermostat to give the temperature desired Whatever this last may be, it is quickly attained, since the heater gives its full rated output immediately the room thermostat calls



A close-up of the Gas Chimney Furnace in the first of the Stanmore houses, showing the gas pilot and flame failure device, the gas burner and the gas valve, which is operated by the room thermostat. In this house an R12/20 New World Gas Water Heater, with an economy valve which gives 3- or 20-gall. storage, is fitted under the draining board.



In the second Stanmore house a New World Circulator has been installed for summer water heating with an economy valve which will give either 5 or 25 gall. hot water storage. On the right is the thermostat which controls the combustion rate of the Solid Fuel Furnace, shown in the photograph on the right.

for heat. Moreover this output is maintained constantly at top level until the thermostat is satisfied. Irrespective of space heating requirements, a constant supply of really hot water is assured by an automatic control.

So far as re-charging the furnace is concerned this calls for little attention, since it is necessary only once or twice in each 24 hours when coal, anthracite, or other dense fuel is used, and from two to four times per 24 hours when burning coke. The ash pan needs emptying only at intervals of from one to three days, according to the conditions of use.

The Planning of the House

The introduction of whole house heating has given the architect a real opportunity of planning the house to afford the maximum freedom of use to the family.

In the planning of the Stanmore houses there is a departure from the usual arrangement of separate rooms. The ground floor area, apart from the kitchen, is left open as a single living space, comfortably heated at all times (or cooled by forced air circulation in summer) and receiving natural light from both sides. The resulting effect is one of spaciousness and light. Upstairs, although the bedrooms and bathrooms are divided off, the provision of complete house heating throughout all the living space enables even the bedrooms to be available for occupation with comfort at any time, and no longer is it necessary for the whole family to congregate round the living-room fire on a cold winter's evening.

The elimination of cold areas in the house with freedom from draughts has made it possible to include the staircase as part of the living-room and so increase the useful space. In one of the pair of houses direct access to the living room is gained from the front entrance—an arrangement which was common in the past but which can only be comfortable with the adequate facilities for complete heating provided in these houses.

The kitchen equipment at Stanmore is all built-in *en suite*, and includes a New World No. 1430 gas cooker and a refrigerator. Extraction ducts have been fitted to provide ventilation in the kitchen and remove all odours of cooking. Abundant hot water is available in each of the two houses; the first is supplied by a New World R.12/20 low-consumption storage water heater and the second draws on the solid fuel cabinet heater during winter and on the New World gas-heated circulator during summer.

The construction of the two houses is normal and traditional, but insulation has been provided to conform with the Egerton standards (Post-War Building Studies No. 19). The outer wall is of customary brick construction, but the inner is built of multi-cavity blocks. A fibreglass quilt completely covers the ceiling joists.

The Heating Systems

For experimental purposes only, two heating systems have been installed in each of the two Stanmore houses. By operating them alternately, all four may be examined and demonstrated. First there is the forced warm air system using the Radiation gas chimney furnace. In this system the air is drawn by fan from the landing down through the heater and ducted to each room, the air being discharged at floor level in each case.

The duct and register areas are so balanced as to give the same mean temperature in every room. In the bedrooms, by closing the warm air registers, temperatures slightly lower than that of the living-room can be maintained, while by closing the door and opening the window still cooler conditions are attained, the temperature decreasing to within 2° or 3°F. of the outside temperature, depending on the extent of the window opening. In the morning, when the bedroom window is closed and the door and warm air register are opened, comfortable temperatures are regained in a few minutes.

For maximum comfort it is not sufficient to be able to heat all rooms to the same mean temperature, but the distribution in each room should be uniform. This condition is satisfied by the Radiation gas chimney furnace to a remarkable degree.

In any room of the house the temperature on any horizontal plane does not vary by more than 1°—2°F. In the living-room the vertical temperature gradient from floor to ceiling is between 3°F. and 6°F. In the bedrooms and bathroom the floor to ceiling temperature gradient is 2°—3°F.

Then we have the forced warm air system using the Radiation solid fuel cabinet heater. In this system, air is drawn by an electric fan from the living-room and first floor landing, passed up through the heater, warmed and delivered to the living-room and dining space through high level registers (7 ft. above the floor) and to bedrooms and bathroom through floor level registers. Similar mean temperature conditions may be maintained as in the case of the forced warm air system using the gas chimney furnace.

The third system is by warm air panel. Here a special first floor construction is required. Reinforced concrete beams of U section, with suspended ceilings for ground floor rooms, form channels along which is passed the air which has been heated by the solid fuel cabinet heater. Lateral flow is permitted by providing 2 in. diameter holes in the side web of the concrete beams. From this interspace the air is passed down ducts in the parti-wall and returned in floor ducts to the heater for reheating and recirculation.

In this case the rooms on the first floor are heated by conduction through the floors, while the living-room and dining space are heated by low temperature radiation from the ceiling and wall. The bedroom temperature may be "topped up" by opening the floor registers which communicate with the floor interspace.

The fourth system is by hot water radiators, and is installed for comparison with the various warmed air methods. The radiator system is operated from gas circulators (to be used in the experimental period only) connected in parallel. Pressed steel radiators are installed in the positions best calculated to give the most uniform temperature distribution in each room and throughout the house. Additionally, floor hot water coils are used inside the front and back entrances. Like the other systems the total output is about 30,000 B.Th.U./hr. and is therefore capable of heating the whole house to 65°F. with outside temperatures of 20°—25°F.

News in Brief

Stockton Corporation's Decision to increase the price of gas by 6d. per 1,000 cu.ft. has been approved by the Ministry of Fuel and Power.

The Dean of Guild Court at Dunfermline has approved plans submitted by the town council for the erection of a new dry purification plant at the Corporation gasworks at an estimated cost of £80,000, and of a 30 in. gas main and supports at an estimated cost of £14,000.

The 44th Annual Meeting of the Wales and Monmouthshire Association of Gas Engineers and Managers will be held this year at Colwyn Bay in North Wales, on May 18 and 19. Application forms for accommodation and full details of the meeting and excursions will be forwarded in due course.

Leeds Plumbers, 150 strong, attended a film show and lecture on gas water heaters given by the Leeds Gas Department. Similar shows have been given to all installation and maintenance fitters to provide them with refresher information. In addition, 35 shows have been given to 3,500 pupils of Leeds schools and evening institutions.

The Annual Corporate Meeting of the Institution of Chemical Engineers will be held on April 22 at the May Fair Hotel, London. The business session at 11 a.m., which will include a presentation of medals, will be followed by an address by the President and a dinner in the evening, at which the principal speaker will be Sir Charles Darwin, the Director of the National Physical Laboratory.

The Nation's Wealth Exhibition of the British Gas Council at Gas Industry House was visited a few days ago by a party of doctors who are taking the course for the Diploma in Public Health. The visit was arranged under the auspices of the Royal Institute of Public Health and Hygiene. The party was welcomed by Mr. J. R. W. Alexander, General Manager of the British Gas Council, and entertained to tea after a conducted tour of the exhibition.

The Film 'Scott of the Antarctic' at a local cinema provided the theme for an unusual window display in the Bromley Showrooms of the South Suburban Gas Company. A backboard with stills from the film was flanked by a dummy figure in arctic clothing and an Electrolux refrigerator, with a loaded sleigh in front. A sign above announced two coming events: 'Scott of the Antarctic,' and 'the time when there are sufficient gas refrigerators for all.'

A Clean Food Campaign has recently been opened at Cheltenham, which has been designed to appeal to caterers, restaurateurs, and the general public. The organising of the campaign has been carried out by the Public Health Committee of the Cheltenham Town Council, in conjunction with the Cheltenham & District Gas Company. Lectures and films have been given in the demonstration theatre of the Cheltenham Gas Company, and an exhibition has been arranged consisting largely of gas appliances used in the catering and allied trades.

Dundee Gas Department is actively planning for the holding of the Royal Highland and Agricultural Show this summer, and will pipe gas to practically every stand. The present intention is to lay 700 yds. of iron mains and 1,500 yds. of service piping. The materials will be lifted for re-use, after the show. The supply will be rated at a cost rather in excess of that being charged to resident users, but even so will not cover the cost of supplying the service. The attitude of the Gas Department is that this is one of the losses which must be carried in order to ensure that the city gains from the holding there of this major agricultural event.

Loan Sanction in connection with the erection of a new gasholder at a cost of over £100,000 has been given by the Ministry of Health to Chesterfield Corporation Gas Committee.

Estimates of Probable Capital Expenditure on Darlington Corporation gas undertaking for 1949-52 have been submitted to Darlington Council. These include £215,032 for 1949-50 ; £304,138 for 1950-51 ; and £131,850 for 1951-52.

The Board of Trade has reduced the issue price of pyrites and sulphur for use in the manufacture of sulphuric acid. In the case of pyrites the reduction is 1½d. per unit (*i.e.*, from 1s. 2½d. per unit to 1s. 1d. per unit). In the case of elementary sulphur the reduction is 1d. per unit (*i.e.*, from 1s. 9d. per unit to 1s. 8d. per unit).

The Malahide Gas Company, County Dublin, will cease to function after May 1. This undertaking, which is owned privately and which rationed gas for only a short period during the difficult years of the war, has decided to abandon the struggle against rising production costs, allied to a reduction in the consumption of its products. There are 130 consumers of gas on the company's books, a considerably reduced number compared with that which the present management took over in 1938, but, with an added demand on the part of householders in the area for electricity, even this reduced number is likely to shrink still further. The working of the undertaking for the past two years has been uneconomical.

Associated British-Pathé, Ltd., filmed the work in the experimental kitchen at Watson House (Gas Light and Coke Company) a few days ago. The results are likely to go into an early edition.

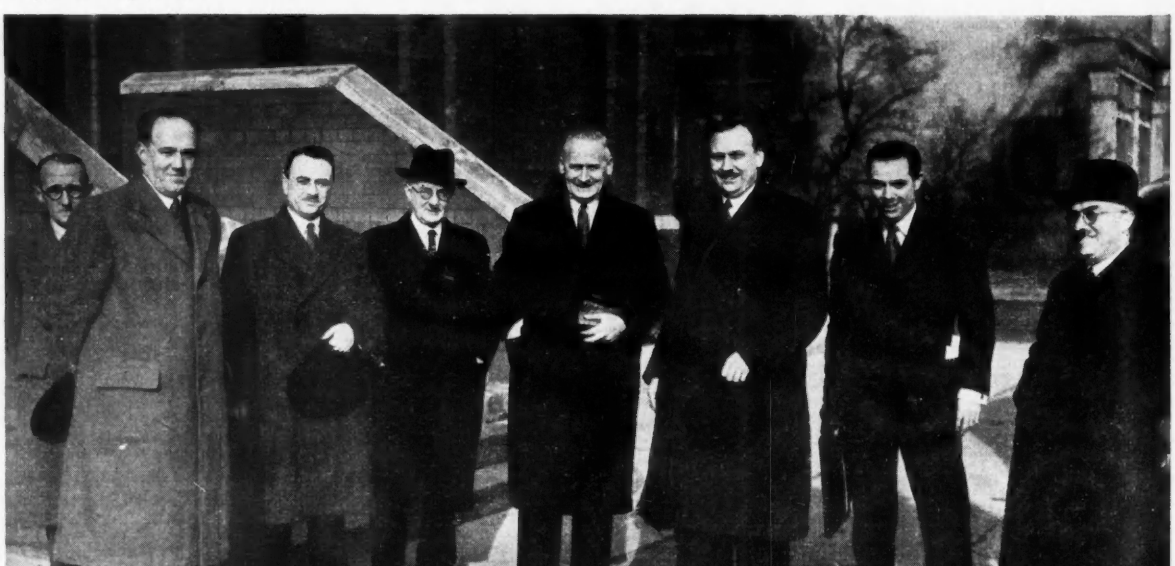
A Street Lighting Committee has been set up by **Batley** Council, following complaints by inquest juries and motorists. Mr. Harry Windle, Distribution Foreman to the Batley Gasworks, has been appointed Street Lighting Superintendent.

Stockton-on-Tees Gas Department has applied for sanction to borrow £36,332 for the supply of gas to 911 houses on the Darlington Lane and Durham Road housing estates. Sanction has been received to borrow £15,000 for the purchase of gas meters. Tenders are to be invited for the supply of mains, &c., to connect the Stockton gasworks with the Cannon Street gasholder at Middlesbrough.

The Merseyside Gas Industries Branch of the Association of Scientific Workers has passed the following resolution : 'That this Branch dissociates itself from the scales published by the Manchester Regional Joint Council for application to technical staffs in the gas industry on the grounds that the rates are not commensurate with the prevailing industrial levels and are not appropriate for staffs engaged in scientific and technical work. It further states that it is not prepared to accept scales for its members unless these have been agreed through its representative in the National Joint Council.

MR. ALFRED ROBENS VISITS GRANTON GASWORKS

On Mar. 25, Mr. Alfred Robens, M.P., Parliamentary Secretary to the Ministry of Fuel and Power, visited the Granton Gasworks, Edinburgh, in the company of Bailie R. West Russell, Chairman of the Gas Committee, Mr. Duncan D. Melvin, Engineer and Manager of the Edinburgh Gas Department, and members of his staff, to examine the works and to meet representative employees. In addressing a gathering of employees, Mr. Robens spoke enthusiastically of the future of the gas industry and promised there would be no political interference in the day-to-day affairs of the Gas Boards. He mentioned that the gas industry had an excellent record in the field of industrial relations and hoped that under nationalisation there would be full co-operation, as hitherto, between management and workpeople in the interests and satisfaction of the gas consumer which Mr. Robens emphasised, were the criterion of gas industry service. Bailie R. West Russell, Chairman of the Gas Committee, also expressed his good wishes for the future of the industry under its new form of ownership. Mr. Melvin, called upon Mr. Charles Sorbie, to speak on behalf of the employees at the Granton Works, and in doing so Mr. Sorbie acknowledged the harmony which had existed in industrial relationships in the gas industry as between management and employees and expressed the hope that under nationalisation the gap between management and workers would be even further reduced and that, in particular, the time factor for the completion of negotiations on industrial labour problems would be lessened. He promised on behalf of his colleagues that the nationalised industry would have their full support and co-operation and that everything would be done on their part to improve the quality of gas industry service.



Left to right: Messrs. Robert Carmichael, Chief Technical Assistant, Granton Gasworks; Thomas Smith, Sales Superintendent, Edinburgh Gas Department; J. P. Scott, Works Superintendent, Granton Gasworks; Bailie R. West Russell, Chairman, Gas Committee; D. D. Melvin, Engineer and Manager, Edinburgh Gas Department; Alfred Robens, M.P., Parliamentary Secretary to the Ministry of Fuel and Power; D. Beavis, Deputy Engineer and Manager, Edinburgh Gas Department; R. Kelf-Cohen, Under-Secretary to the Ministry of Fuel and Power.

WITH THE NORTH BRITISH ASSOCIATION

PHOTOGRAPHS TAKEN ON THE OCCASION OF THE SPRING MEETING IN EDINBURGH, MARCH 25

In the photograph on the left are The Lady Provost of Edinburgh, Miss Rodney Murray, Mr. Alfred Robens, The Lord Provost of Edinburgh (Sir Andrew Murray), and Sir A. G. Clow, Chairman, Scottish Gas Board, at the Civic Luncheon in the Assembly Rooms, Edinburgh.

Left to right: Messrs. A. Morris (St. Andrews); Lewis Fletcher and J. W. Broad (Parkinson Stove Co., Ltd.); J. Macmillan (Lasswade and Bonnyrigg); C. R. Trotter (Tully, Sons and Co., Ltd.); W. M. Henderson (Dalkeith); T. Smith (Edinburgh); H. Macpherson (R. and A. Main, Ltd.).

In the left-hand photograph are Mr. D. Beavis (Deputy Engineer, Edinburgh) and Mr. David Fulton (Engineer and Manager, Helensburgh). In the other photographs, left to right, are Messrs. J. Couper (Forth and Clyde and Sunnyside Iron Co.) and H. G. Ritchie (late Engineer and Manager, Falkirk); F. Jenkins (Main Water Heaters, Ltd.) and H. H. Webster (R. and A. Main, Ltd.).

COMBINED HEAT AND POWER SUPPLIES

The second full-day conference on Combined Heat and Power Supplies, organised by the Institute of Fuel, will be held at the Institution of Mechanical Engineers, Storey's Gate, S.W.1, on April 27, at 10 a.m. and 2 p.m. This conference will deal with the interlinking of the heat and power systems of adjoining industrial plants, and also with the co-ordination of heat and power supplies and demands throughout a district. Attention will be directed to the possibilities of dove-tailing heat and power requirements in order to secure a major economy in the consumption of fuel. A large attendance is expected of specialists in this field, and it is hoped that the conference will give a lead towards definite action on the important national problem which will be under discussion.

The following papers will be presented: 'Technical Aspects of Interchange with the Grid,' by L. D. Anscombe and A. J. Ellison; 'Surplus Heat or Power Supplied to Adjoining Works,' by Dr. G. E. Foxwell; and 'Co-ordinating Heat and Power in a District,' by H. E. Partridge.

The conference will be open to the public, and all who are interested are invited to attend. A buffet lunch will be served at the conclusion of the morning session. Reservations, accompanied by a remittance of 5s. per head, should be made in writing to the Secretary, The Institute of Fuel, 18, Devonshire Street, Portland Place, London, W.1, before April 13.

For further consideration of general and regional aspects of the problem, the North-Western Section of The Institute is holding a Conference on the same subject at the Engineers' Club, Manchester, on May 11, at 11 a.m. and 2 p.m.

Kirkintilloch Burgh Council has agreed to reduce the excess payment for gas over the rate by 6d. per 1,000 cu.ft., following a request by Campsie District Council to cut the local price of gas. Alternative charges of 25s. a year, plus burgh rate, remains.

NEW SHOWROOMS AT FEATHERSTONE

Colonel W. Moncrieff Carr, Chairman of the North Western Gas Board and of the Ackworth, Featherstone, Purston and Sharlston Gas Company, presided at the opening of the Company's new showrooms at Station Lane, Featherstone, on Mar. 8. The spacious and well appointed showrooms which have a demonstration theatre on the floor above were officially opened by Councillor A. Evans, J.P., Chairman, Featherstone Urban District Council, who said he welcomed the new showrooms as being a brightening influence on Station Lane.

The platform party at the opening ceremony. Left to right: A. McDonald, General Manager of the York-Harrogate Group; M. H. Tetley, Director, United Kingdom Gas Corporation; Councillor A. Evans, J.P., Chairman of the Featherstone Urban District Council; Colonel W. M. Carr, Chairman; Dr. Roger S. Edwards, Chairman of the North Eastern Gas Board; H. B. Taylor, General Manager, West Riding Group of Gas Companies; and Councillor H. Taylor, Chairman, Sharlston Parish Council.

Colonel Carr said he was very pleased to have the opportunity to preside, as it was his last duty as Chairman of the Featherstone Gas Company. Remarking on the enormous growth of the Company, Colonel Carr said that 92 mill. cu.ft. of gas were sold in the district last year, compared with 40 mill. in 1936. The price of gas had never been increased; it was a 1s. per therm in 1936 and it was a 1s. per therm to-day. Reconstruction and extensions had been achieved without adding to the capital of the Company.

Colonel Carr went on to say that this function was, for him, a welcome and a farewell, as far as Featherstone was concerned. On May 1 they would hand over to his colleague, Dr. Roger Edwards, as Chairman of the North Eastern Gas Board, an undertaking of which they were very proud. He was confident that when the North Eastern Board took over it would uphold the tradition of personal service.

The new gas showrooms at Featherstone.

After being introduced to the company by Colonel Carr, Dr. Edwards said that this was his first opportunity since becoming Chairman of the North Eastern Gas Board to make contact with the good folk of Yorkshire. He paid tribute to their Chairman, Colonel Carr, and said that everybody at the Ministry was very happy that he, Colonel Carr, as one of the great national figures in the industry, should have charge of the largest Area Board, and he wished him and his colleagues equal success. Dr. Edwards said the new Board would seek good relationships with local authorities, and they recognised the vital importance of coal mining areas. In thanking the Chairman and others connected with the Company for their work in the past, Dr. Edwards said the North Eastern Gas Board would take over, not only magnificent showrooms, but a nice balance in hand. He paid tribute to what the United Kingdom Gas Corporation had done for the gas industry in the West Riding of Yorkshire. Under the energetic leadership of Colonel Carr, it had set a pattern which would be repeated all over the country. Dr. Edwards said he would like to assure consumers that the service they had received from the Featherstone Gas Company would be continued, and, if possible, improved under the ægis of the North Eastern Gas Board.

Mr. H. B. Taylor, General Manager, West Riding Group of Gas Companies, moved a vote of thanks to those taking part in the opening ceremony, and the company were later entertained at tea.

SMALLER MUNICIPAL GAS UNDERTAKINGS

A final meeting of the Association of Smaller Municipal Gas Undertakings was held in London on Mar. 22. It was decided that the Association should be disbanded on April 30, and that the assets should be transferred to the Gas Consumers' Council. A vote of thanks to the officials, members of the Town Clerks' Panel and members of the Committee was also recorded by the Association. The decision to form the Gas Consumers' Council was taken at a meeting of the representatives of local authorities and the following officers were appointed:

Mr. F. J. Harrison (Newcastle, Staffs.) to be Chairman; Mr. F. G. Shaw (Buxton) to be Vice-Chairman; Mr. A. E. Turner (Hanley, Stoke-on-Trent) to be Secretary and Treasurer; and Messrs. R. L. Hughes (C.C. Ashton-in-Makerfield), and E. Yates (Darwen) to be Auditors. The following Committee members were also elected: K. R. F. Newton (Sedgley), R. S. Wood (Abertillery), J. Robinson (Morecambe), J. W. Minnikin (Bingley), W. M. Clarke (Tredegar), E. Yates (Darwen), R. L. Hughes (Ashton-in-Makerfield), L. Kent (Newton-in-the-Willows), W. Macintyre (Bridgenorth), A. B. Glasspool (Hultenprice, Anlaby), T. Newsome (Wombwell), S. Jones (Pontypridd). A copy of rules was submitted and adopted. It was also decided that the members of the Association should be the first members of the Gas Consumers' Council, and that all local authorities could apply for membership.

DEVELOPMENT AT WALSALL

The proposals for an extension of the Pleck Gasworks, Walsall, which have now received the authorisation of the Ministry of Fuel and Power, will, when they are completed, increase the gas-making capacity of the works from 4 mill. to 10½ mill. cu.ft. per day. This extension will form the first stage of the plans for enlarging the Pleck Works, and provision has been made in the layout of the plant for its further extension in the future, when it is planned to duplicate the carbonising plant.

The works is situated on high ground and the new buildings will be fully visible from both the Walsall-Wednesbury Road and the main railway line from Birmingham. Particular attention has, therefore, been paid to their architecture. The retort house will be a modern industrial building essentially functional in its character and yet æsthetically pleasing. The natural vertical lines of the structure will be reproduced in the buff-coloured brickwork and emphasised by the introduction of vertical panels of white stone. Closely associated with the appearance of the building will be the improved working conditions which will be provided for the men employed. Dust extraction and vacuum cleaning plants will keep the emission of dust and fumes to a minimum and an unusually complete suite of messrooms between the new and the future retort houses will contribute to the well being and efficiency of the operatives.

The Ministry of Town and Country Planning have passed the plans for the new works and the Ministry of Fuel and Power have authorised under Regulation 56A of the Defence (General) Regulations, 1939, the construction of the works by the Woodall-Duckham Vertical Retort & Oven Construction Co. (1920), Ltd., who will act as the main contracting firm. The new plant will be capable of carbonising over 350 tons of coal per day and of producing therefrom 6½ mill. cu.ft. of 450 B.Th.U. gas.

HIGHER COKE RATION

Asked in the House of Commons on Mar. 17 when he proposed either to deration coke or increase the domestic ration, Mr. Hugh Gaitskell, Minister of Fuel and Power said: Although the supply of coke has increased, it is not yet sufficient to enable all restrictions on its consumption to be lifted. I propose, however, to increase the maximum permitted quantity of boiler fuel which can be obtained without licence in the year beginning May 1 next from two tons to three tons. Not more than two out of the three tons will be obtainable without licence in the form of anthracite, dry steam coal and manufactured fuels, since these are still very scarce.

HAMILTON DISCOUNTS DISPUTE SETTLED

An action raised by Hamilton Co-operative Baking Society, Ltd. against the town council over the question of gas discounts has been amicably settled out of court. At its meeting last week the Council approved a recommendation of its Gas Committee to refund to the Society the sum of £139 10s. 1d., being the difference between discount of 40% and 51% on the gas account for £1,395 for the period Oct. 24, 1947, to Jan. 24, 1948. The Council also agreed to pay legal expenses incurred by the Society in the matter. Minutes of the Gas Committee recorded that a letter had been received from the Society's law agents stating that they had been authorised to settle the action on these terms, and on the additional condition that 'in future the Society will receive a period of three months' notice prior to any reduction in their existing discount of 40% becoming effective.' This additional provision was also accepted by the Council; but it has agreed (on the recommendation of the Gas Committee) that a similar suggestion by the Society with regard to notices of increases in the basic price of gas—other than the present method of intimation through the local press—would not be practicable in view of the imminence of vesting day, when the undertaking would be taken over by the Scottish Gas Board. The Council also agreed that a rebate, calculated at the appropriate rate, should be given on the accounts of other consumers affected.

ELLESMERE PORT TAKES SURPLUS REFINERY GAS

From Mr. S. H. Lawrence, Engineer and Manager of the Ellesmere Port Gas Undertaking we learn of a further step in the closer integration of British petroleum refining with the general economic and industrial activity of the country taken on March 16, when a pipeline was opened between the works of the Ellesmere Port Gas Department and the nearby petroleum refinery of Lobitos Oilfields, Ltd. This line, approximately two miles in length, feeds the gasworks with surplus gas formed during cracking operations at the petroleum refinery.

The cracking unit concerned is a Dubbs thermal cracking unit of a standard pattern which has been operating for some years and which is engaged in the production of motor spirit from normal feed stocks; in the course of this manufacture of motor spirit there is normally produced gases which consist mainly of low molecular weight hydrocarbons.

It is standard practice at the refinery to use these gases as fuel both for firing the cracking unit itself and for steam raising purposes, but there has always been a small surplus which it has not been practicable to utilise in this manner. By linking up the refinery with the local gas undertaking such surplus can be put to good use in enabling the gasworks to economise in coal and to meet peak load demands more readily. Negotiations were initiated over two years ago, but difficulties, mainly in the delivery of material, have delayed the project until this month.

The gas is received direct from the Dubbs plant at a pressure of 40 lb./sq. in., and is piped at this pressure to the gasworks, where a high/low pressure governor reduces the pressure to 8 in. W.G. for metering and mixing with the coal gas stream. The surplus gas as received has a C.V. of 1,500 B.Th.U. per cu.ft., a Sp.Gr. of 0.9, and is practically free from H_2S. Dilution is obtained by a reduced C.V. of the coal gas made plus producer gas to balance peak deliveries of refinery gas. The declared C.V. of 425 B.Th.U. per cu.ft. remains unaltered.

The quantity of gas at present being received is 25,000 cu.ft. per day, which, owing to the greater calorific value of petroleum gas as compared with coal gas, is equivalent to four times the amount of the latter. Future developments will be concentrated on obtaining an increased quantity of refinery gas, and the installation of specially designed automatic calorific value control.

The estimated saving of coal by the Ellesmere Port undertaking is 2,000 tons per annum, which may not appear an important quantity but it is significant and, with the great expansion of the petroleum refining industry which is due to occur in Britain within the next few years, the assistance which petroleum refineries will be able to give in this manner to the gas industry may assume important proportions.

HOME SERVICE DISCUSSION GROUP

A meeting of the London District Home Service Advisers' Discussion Group was held at the Gas Light and Coke Company's Demonstration Theatre, Edgware Road, on Mar. 11. It was an "open" meeting and many guests of the Home Service Advisers were present, including a number of teachers of domestic subjects and representatives of the Ministry of Food and Ministry of Agriculture. One lady travelled especially from Bristol University's research station at Long Ashton to attend the lecture. There was in all an audience of 190 to hear Miss G. Chappell, M.Sc., Lecturer at King's College of Household and Social Science, speak on the research being carried out on the nutritive value of pressure cooked foods. Miss J. Houghton, of the Research Kitchen, Watson House, gave a practical demonstration on the use of various types of pressure pans. A vote of thanks to Miss Chappell and to Miss Houghton for an instructive and enjoyable evening was proposed by Mrs. Joan Robins, Chairman of the District Group.

SOUTH WALES GAS SUPPLY

It was reported at the meeting of the Wales Board for Industry in Cardiff on Mar. 28 that measures taken by the Ministry of Fuel and Power to overcome the serious gas supply position in the Eastern and Western Valleys of Monmouthshire had been successful. Mr. J. W. Davies, senior Regional Officer, said that the deterioration in the coke ovens at Blaenavon had been checked and the plant saved and a large number of ovens had been rebuilt. This, with the introduction of the oil cracking process, had resulted in a considerable increase in the quantity and quality of the gas available to the Pontypool Gas Company for distribution.

'At present,' said Mr. Davies, 'about one million cu.ft. of gas a day is being sent out and domestic consumers are receiving adequate supplies. Supplies to industry are also being increased and a further gradual improvement is anticipated. The general condition of the plant is, of course, far from satisfactory, but unless something unforeseen happens there should not be a recurrence of the difficulties and hardships experienced at the beginning of the year. Management and men at the Blaenavon coke ovens and employees of the Pontypool Gas and Water Company have worked splendidly during the past few weeks and the fact that it has been possible to save the ovens and build up gas supplies is due to their untiring efforts.'

Radiant Heating Ltd.

are pleased to announce that they have completed arrangements whereby, with effect from 1st April, 1949, Ascot Gas Water Heaters Ltd. have been appointed selling agents for all products. The existing sales organisation of Radiant Heating Ltd., will continue as hitherto and will work in close co-operation with the sales organisation of Ascot Gas Water Heaters Ltd.

Orders may be despatched in future either direct to Radiant Heating Limited, or through the Head Office or Branches of Ascot Gas Water Heaters Limited, according to the wishes of customers.

RADIANT WORKS, 9 BARNSBURY PARK, LONDON, N.1..
Telephone: NORth 1677 (3 Lines).

(*Advertisement*)

CONTROL OF DISTRICT HOLDERS

By A. G. HOLTAM, M.INST. GAS E.,

Distribution Engineer and Manager, Cheltenham and District Gas Company

THE author has recently received requests from other undertakings for information regarding the methods employed at Cheltenham for the automatic control of gas entering district holders supplied from the high pressure mains system. While it is not claimed that the following is exhaustive, it is hoped that sufficient information is given to be of value to engineers faced for the first time with such a problem, and perhaps draw from other undertakings details of other methods of control. It is likely that with increasing physical integration of undertakings due to nationalisation, the subject will become of increasing importance.

The engineer's problem may be the simple one of filling one district holder, probably that of another undertaking taken over and which it is desired to supply in bulk. On the other hand it may be the more complicated one of supplying several district holder stations from one, or perhaps more, primary manufacturing and compressing stations. The district holder stations may also be secondary compressing and/or relay stations. The varying requirements can complicate the selection of the most suitable control device but fortunately the devices themselves are basically simple. Some of the methods herein described are the subject of Patent applications.

A Simple Automatic Cut-Off Valve

Apart from hand controlled valves, the most simple and the oldest means of automatically controlling gas entering an unattended holder is typically illustrated in Fig. 1. The valve chest can contain a single or double valve(s) and seating(s). The valve falls to close. The valve spindle projects through a stuffing box at the top and can carry added weight or a spring to assist in its closing. A flexible cable, secured to the spindle, passes up and over pulleys fixed to the holder framework and terminates

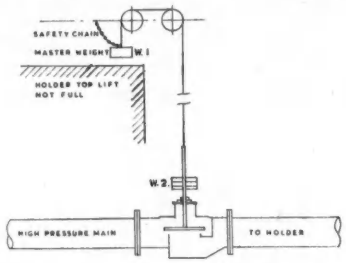


Fig. 1.—Simple holder operated valve.

in a master weight suspended over the crown of the holder. As the holder crown rises and reaches the master weight it lifts it and so permits the weighted valve spindle and valve to fall and the valve to close on to its seating. As gas is used from the holder the crown falls; the master weight again takes control and re-opens the valve.

The holder will probably be filled with comparatively cold night gas, and sufficient room must be left to permit of expansion of gas due to the sun. The height to which the holder can fill can be adjusted by lengthening or shortening the cable. If the cable breaks, the valve will close, which is a very necessary safety precaution. Also, in such a contingency, to prevent the master weight falling on to, and possibly through the holder crown, a safety chain must be fitted.

Recently, at one company's small unattended holder station, the cable broke, closed the valve, and the holder grounded. As a result there was a gassing fatality. Where a cable is used, a necessary safety precaution is the fitting of a constant outlet pressure governor between the inlet to holder valve and town mains. By the use of an alternative valve, cables are not essential.

With multi-lift column guided holders the master weight can if desired be operated from the top curb of the lower lift. With spiral guided holders the weight can be operated from the top or bottom curb, or a suitable bracket or plate fixed to the bottom lift.

It should be appreciated that, with this valve in use, as gas is used from the holder, the holder commences to fall and the valve commences to open to replace the used gas. The whole district demand is therefore placed on the high pressure inlet main and not on the stored gas in the holder. As the demand for gas from the holder increases, the valve opens further until it is fully open, and the nominally high pressure transmission main can fall to holder pressure. This would be an intolerable condition where the transmission main had to supply consumers and district governors en route, and especially when the holder station is in effect itself a large consumer on a high pressure main supplying other holder stations and villages beyond it. This undesirable effect can be reduced, but not satisfactorily, either by using a comparatively small valve, or partly closing an ordinary hand valve in series with it. Except as an expedient neither method is recommended.

The author has seen small sizes (up to 2 in.) of this type of valve fitted in series with a Horstmann Type 5/3/ENC service tap and clock, thus enabling passage of gas into the holder to be time controlled, so that gas is permitted to pass into the holder at off peak times only. Such an arrangement is usually suitable only for very small holders supplied from medium or high pressure mains.

A Time Controlled Valve

In the early stages of development of the Cheltenham added areas it was considered that a simple holder-operated cut-off device capable of being time controlled would be satisfactory. To provide valves of any desired diameter, duel valve, direct acting diaphragm type, constant outlet pressure governors with secondary isolating diaphragms were converted for use as shown diagrammatically in Fig. 2. The holder operated part of the

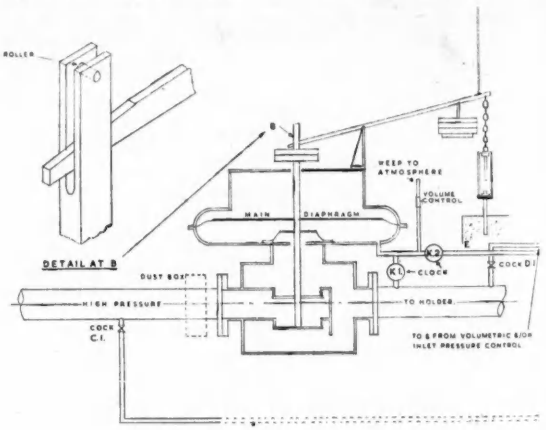


Fig. 2.—Holder valve and gear.

device is similar to the valve shown in Fig. 1. By the addition of an ordinary lamp clock (K.1) with weep to atmosphere (or preferably a Horstmann 3A/UNI with C.C.S. pattern gas cock having vent to atmosphere when in off position) gas can be passed into the lower diaphragm chamber and the valve closed. The usual method of operation was to time the clock to open the holder valve during the night to fill the holder, and close it during the day. The stored gas in the district holders thus fed the local low pressure systems during the day and all compressed gas was reserved in the transmission main to supply villages and other consumers en route. However, this method still suffered from the substantial disadvantage that when the valve did open, the supply main fell to holder pressure. While this low pressure could be confined to night time, or at least to off peak periods, the pressure fluctuations were far too great, and insufficient gas was left in the main even for off peak periods.

On one high pressure supply main were four holder stations, each on an average twelve miles apart. When the valve on the first (nearest) holder opened it was necessary to restrict severely the amount of gas that could pass into the station to ensure some gas passing on to the other stations and consumers beyond.

Constant Pressures or Constant Volumes?

Various ways of rectifying this difficulty were considered and the choice was thought to rest between two methods:

(1) Constant pre-determined pressure (variable) to be maintained in the supply main at each holder station.

(2) Constant pre-determined volume (variable) to be supplied into each holder station.

Method (1) was selected for the following reasons:

Along the whole route of supply mains, all premises—domestic, commercial and industrial—desiring a gas supply had been connected without hesitation. Many villages were also supplied. It was considered that no method which restricted this economical and lucrative development could be justified. The practice did however, introduce a very variable demand upon the transmission main en route.

It was desirable that the method adopted should permit of as near as possible a constant rate of compression over the 24 hours from the primary compressor station at Cheltenham, notwithstanding the variable demand en route.

The filling of a holder is in itself a 'demand' on the transmission main and compressor, and should not be permitted to become superimposed upon normal consumer demand to the extent of depriving consumers of adequate supplies. Indeed, on the contrary, if consumer demand en route temporarily exceeded the primary compressor/main capacity—which it should, with an economically developed system—it would be necessary to assist the main via secondary compressors from the district holders and by this means greatly increase the maximum hour capacity of the system. In this manner, and providing district storage is adequate the only limit to development of the system either en route or off outlets of district holders would be the maximum *daily* capacity of the primary compressor and transmission main.

A volumetric governor is merely a limiting device—it places a ceiling upon the maximum rate of flow—and unless it is manually reduced it will permit up to the set amount to pass into the holder, whether or not the supply main can afford it. Conversely, it will not pass more than the set amount even though the supply main be bursting to give it.

If method (2) had been selected, it would still have been necessary to close the holder valves at peak periods to reserve gas for consumers en route, and even at off peak, either local or remote attention would have had to be given to the adjustment of volumes passing into the various holders.

The constant inlet pressure method also is a flow limiting device, but interferes with the flow only at the precise time and to the precise amount needed to balance consumer demand and compressor/main capacity. It does this automatically, and in a manner superior to manual control.

Constant Inlet Pressure Auxiliary Device

To meet the mechanical requirements of method (1) it would have been possible to fit in series with the existing holder cut-off valves (Fig. 1 or 2) a constant inlet pressure governor or relief valve. Such a valve will remain closed at low pressures in the transmission main but will open when the pressure rises to that for which the valve is set, pass all surplus gas into the holder, and thereafter maintain constant pressure in the transmission main. This would have required alterations to the connections at all holder stations besides being costly. Other means were therefore investigated.

Two devices were designed, one a dry diaphragm type and the other a mercury filled tube, which, by modifying the gas entering the lower diaphragm chamber of the existing holder valve (Fig. 2) permitted it to operate also as a relief valve. The mercury type was adopted due to its wide accurate range of adjustment, and it can be recommended with the greatest confidence.

Remote control of this device could no doubt be arranged if desired. Two or more of these devices can be fitted in parallel, each (except one) with a gas clock to give time controlled varying pressures in the supply main.

Remote Control of Holder

To operate the holder valve by means of cables as shown in Fig. 2 it is necessary to fit it close to the holder. Sometimes this is inconvenient, or even impossible. In such circumstances the cable can be dispensed with and the valve operated by one of the following two methods, which will permit it to be sited a distance from the holder.

Gas Impulse Pipe.—In parallel with or in lieu of clock K1, a small gas impulse pipe is taken via the holder (Fig. 3). In this pipe, at the holder, a small gas tap or valve is fitted, operated by the rising holder. When the holder reaches its maximum height, the valve in the impulse pipe is turned on, gas passes to under side of main diaphragm of holder valve, and the latter is closed. As the holder falls, the small tap is turned off, gas bleeds from lower diaphragm chamber via atmosphere vent, and holder valve opens. By dead-weighting the diaphragm in excess of holder pressure, the atmosphere vent can if desired be dispensed with and the very small amount of operating gas bled into holder main.

Solenoid Gas Valve.—In parallel with or in lieu of clock K1 a small solenoid gas valve is fitted (Fig. 4). At the holder is fitted an electric switch operated by the rise and fall of the holder and wired to the solenoid. As a safety precaution, the holder valve should close upon electric failure. The arrangement should therefore be: Holder full, switch breaks contact, solenoid de-energised and passes gas to under main diaphragm, holders valve closes. The switch can take the form of a mercury bulb switch mounted on a bar tilted by a small bracket on the holder lift or an ordinary type weather-proof limit switch operated in a similar manner.

To avoid a hunting effect, it is desirable that once the impulse gas tap or solenoid has been opened it should not be closed again until the holder has lost some gas, say a half plate or more, and the holder operated gear has been designed accordingly. Alternatively, manual closing can be employed, if only to force attendance and inspection at the holder station once per day.

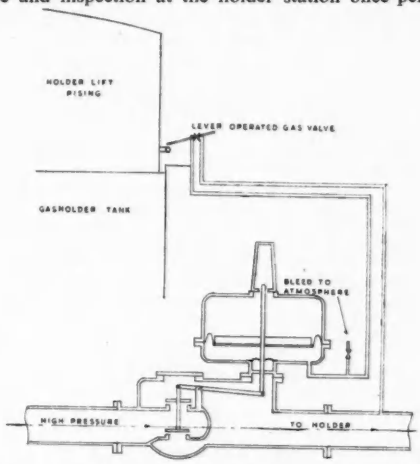


Fig. 3.—Holder valve, gas impulse pipe operated.

It will be realised that with method (2) the same solenoid gas valve can be wired to another switch in series with the holder switch for hand or automatic control over telephone lines within the holder station, from the distant compressing station, or elsewhere; push button or time or pressure controlled.

Variable Volumetric Control Auxiliary

In some cases Volumetric Control may be preferred, and there may be something to be said in favour of providing both limits—pressure and volume. If this required independent main valves the cost would be unreasonably high, but with the Cheltenham valve this is not necessary. A small and very simple constant volume control has been designed by us for fitting in parallel with the mercury constant pressure device previously described. This volume control can be varied by hand locally, or motorised for remote control. Whether or not remote control is advisable will depend upon circumstances and the system. Consideration must also be given to exactly how, and by whom, the remote control will be operated, and as to whether an entirely automatic local time and pressure control will not do all that is necessary,: without the risk of failure of the human element.

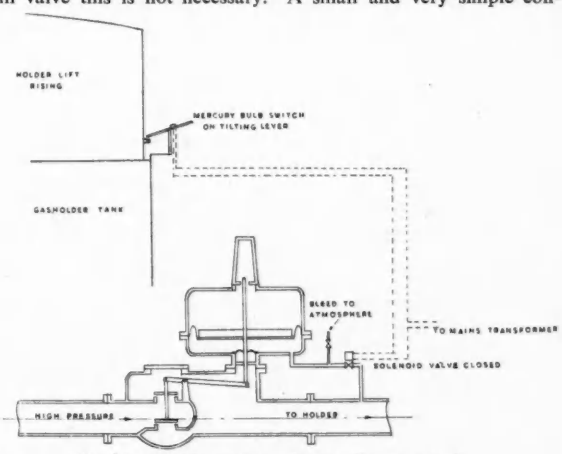


Fig. 4.—Holder valve, electrically operated.

In some circumstances it may well be that a remote controlled motorised double faced or similar valve will be suitable. The relay equipment produced for the operation of such valves has reached a high state of perfection. Apart from the control of gas, such valves are used in large numbers in such places as generating stations for control of steam and water.

COMPANY MEETINGS

BRITISH GAS LIGHT COMPANY

THE 218th Ordinary General Meeting of the British Gas Light Company, Ltd., was held at the Chief Office of the Company, 2, The Abbey Garden, Westminster, S.W.1, on Wednesday, Mar. 30, 1949, Mr. HAROLD G. PALMER, Chairman, presiding.

The Secretary, Mr. F. T. BROOKES, read the notice convening the meeting, together with the reports of the Auditors. The Directors' report and statement of accounts for the year ended Dec. 31, 1948, were taken as read.

The CHAIRMAN, in his statement which had been circulated to the proprietors, said: It is with the deepest regret that I have to record the death of Mr. HENRY WOODALL on Oct. 24, 1948. Appointed a Director in 1916, he was Chairman from 1919 until his death, and this period was marked by a great expansion in the Company's interests due to his unsurpassed knowledge and experience of the requirements of the gas industry. He rendered invaluable services to the Company and his unfailing courtesy and kindness endeared him to all his colleagues, by whom he is greatly missed.

The Board have been kind enough to appoint me Chairman, an honour which I appreciate the more since my father occupied this position from 1890 to 1914. It gave us much pleasure to ask Mr. F. T. BROOKES, our General Manager and Secretary, to fill the vacancy on the Board.

The Accounts

The accounts for the year 1948 will, I hope, be regarded as satisfactory. After meeting all prior charges and income tax we are able to recommend the payment of a final dividend of 4%, less tax, bringing the distribution for the year up to our usual rate of 7½%, less tax. This will leave a sum of £95,399 to be carried forward to the next account, an increase of £15,231. On the credit side of the Profit and Loss Account, the amount of profits transferred from gas undertakings, £106,081, is £10,300 more than in the previous year, mainly due to increased profits at Trowbridge and other of our smaller stations. Before arriving at the figure of £106,081, we have charged against revenue more than £60,000 expenditure on resetting retorts and works reconstruction. There is an increase of £1,169 in interest received, due to the higher amount of temporary loans to subsidiary companies, but the total from dividends and interest on investments is £4,400 lower, as we have realised Government securities during the year.

The £378 withdrawal from the Norwich Reserve Fund represents interest accrued on the investments of that fund at Dec. 31, 1947, and received during the year 1948, and profit on their sale. Apart from this, the fund was exhausted by the withdrawal made in 1947, as was mentioned by the late Chairman in his address at the last annual meeting.

On the other side of the Profit and Loss Account interest on temporary loan from bankers is higher by over £4,200, as we had to have further recourse to our bankers to finance reconstruction works and capital expenditure.

An explanation is necessary for the reduction of £31,600 in the charge for income tax. This year's accounts properly bear one-quarter of the tax for the fiscal year 1947-8, and three-quarters of the tax for the fiscal year 1948-9. The basis of taxation for the fiscal year 1948-9 is the profits shown by the accounts of the Company for the year 1947. During that year we utilised substantial sums which we had set aside out of previous years' profits as a reserve against the resetting of the vertical retorts at Hull, and we brought into our Revenue Account more than £18,000 from the Norwich Reserve Fund. The sums thus utilised in 1947 had already been charged to income tax in previous years.

In normal circumstances when the income tax charge is low for such reasons it is prudent to make a reserve based on the profits for the current year so that the charge in the following year when these profits would become the basis of assessment could be reduced by the amount of such reserve. Since, however, we know that the Company will be dissolved on May 1, 1949, under Section 32 of the Finance Act, 1946, the profits for the year 1948 can never be the basis for taxation. In our final accounts we shall only have to provide for tax on four months' profits, three months of which will again be on the basis of the accounts for 1947. We are satisfied, therefore, that there is no need to make any extra provision.

Balance Sheet

There are a number of changes in the Balance Sheet to which I desire to direct your attention. On the liabilities side under the heading Reserves and Surplus there is an increase of £4,871 in the General Reserve Fund, being profits on sales of investments during the year, and under the heading Future Liability, the item of £10,431 in connection with works repairs and renewals at Hull disappears. This provision was made in previous years towards the cost of work completed this year. I have already mentioned in connection with the Profit and Loss Account the increase in the temporary loan from Bankers, and I shall refer to it again after drawing your attention to three substantial increases on the assets side of the Balance Sheet, namely, £225,000 under the heading of Fixed Assets, representing additional plant installed at works and additional mains, meters and gas stoves; £96,000 increase in loans to subsidiary companies which represents the financing of similar expenditure at those undertakings, and £95,000 under the heading Current Assets, being mainly increases in the value of stocks and amounts owing by sundry debtors for gas and residual products, &c. These three increases total £416,000 and have been financed by the increase of £162,000 in the Temporary Loan from Bankers shown on the Liabilities side of the Balance Sheet, and by the sales of Government and other securities amounting to £279,000 shown on the assets side under the heading of investments.

Had the Company been continuing in existence, the Directors would have hesitated to reverse a policy which has held for so many years of investing the reserve funds outside the Company but, in view of the imminence of nationalisation and the dissolution of the Company, there seemed no object in retaining investments in order to hand them over to an Area Gas Board, particularly when money was needed to finance the expansion of the business and these factors make it virtually impossible to obtain fresh capital.

Sales of Gas

The total gas sold at all the Company's stations and subsidiaries during 1948, for the first time exceeded 5,000 mill. cu.ft., and was 2¼% more than in the year 1947, and 53% greater than in 1938. Further increases in the cost of coal made it necessary for us to raise the price of gas at most of our undertakings under the Gas Charges (No. 2) Order, 1947.

I am glad to be able to report that the laying of the seven miles of main from our Hull Station to give a supply of gas into the holders at Brough, which was referred to in Mr. Woodall's address last year, was completed according to programme in December, 1948, and by virtue of the Brough Elloughton & District Gas Order, 1948, the agreement entered into between your Company and the Liquidator of the Brough Elloughton & District Gas Co., Ltd., became effective on Jan. 1, 1949, when the responsibility for the supply of gas to the consumers in the Brough Company's area became that of a new non-statutory gas undertaking known as the British Gas Light Co., Ltd., Brough Station.

Nationalisation

The Minister of Fuel and Power has announced that May 1, 1949, is the vesting date under the Gas Act, 1948. On that day the assets and liabilities of our subsidiary gas companies will pass to the appropriate Area Gas Boards and the assets and liabilities of the British Gas Light Company, represented mainly by its 20 directly owned and operated gas undertakings known as stations will pass in the first place to the Eastern Gas Board and subsequently some will be transferred to the Gas Boards more appropriate to the areas served by them.

Holders of securities will be compensated by the issue of British Gas Stock. The amount of stock to be issued in exchange depends on two factors, first, the value of the securities held ascertained in accordance with Section 25 of the Act; only three of the Company's securities were quoted on the relevant dates and the values of all the others have to be agreed by the Stockholders' Representative with the Minister or, failing this, settled by arbitration. Secondly, the amount of British Gas Stock issued will have regard to the market value of Government Securities, in the opinion of the Treasury, at or about the vesting date. At the Statutory Meeting held on Feb. 9, 1949, Mr. WM. CASH, JNR., F.C.A., was unanimously appointed the Stockholders' Representative for this Company.

The Final Period

In view of the substantial sums standing to the credit of the Profit and Loss Account and the General Reserve Fund, the Directors propose to make pro rata payments on April 30, 1949, of interest on Debentures and Debenture Stocks covering the period to that date from Jan. 1, 1949, and to exercise the power given them by the Articles of Association and pay interim dividends on the same day as follows: £2 6s. 8d.% (actual), less tax on the 7% Cumulative Preference Stock; £1 16s. 8d.% (actual), less tax on the 5½% "B" Cumulative Preference Stock; £2 10s.% (actual), less tax on the Ordinary Stock.

These are the maximum rates allowed by the Gas Act, 1948, and will cover the period from Jan. 1, 1949, to April 30, 1949, and thus avoid the holders having to wait an indefinite period for these final payments.

The British Gas Light Company was formed in 1824 so that on dissolution it will have been in existence for 125 years. During this long period the Company has been well served by its Officers, Staff and Workmen. I cannot conclude what will be the last

address of a Chairman without expressing my deepest thanks to them all, past and present, for their loyal service. In 1912 my father as Chairman instituted a medal and certificate to be presented to all who completed 25 years' continuous service with the Company. The last of such awards will be made this year and in 37 years we shall have presented 953 medals and certificates—a proud record which says much for the happy relations which have existed between the Company and those who have served it. I hope and believe that the new Area Boards will be able to command the same loyalty and long service.

In moving the adoption of the report and accounts, the CHAIRMAN said this was actually the first and last time he would have the privilege of presiding as Chairman at an annual general meeting of the Company, of which his family had for generations been shareholders. The Company had grown slowly and steadily under wise and progressive administration coupled with conscientious co-operation between all who had served the undertaking. Its set-up, especially during the past 25 years, whereby small undertakings were grouped round larger and well-established works, under experienced engineers and technicians, was after all the basis of the new regime under Area Boards. They had acted wisely and successfully, and it was satisfactory that their work was going to be continued in principle. The proprietors would be glad to know that one of their Directors, Mr. Henry F. H. Jones, had been appointed Chairman of the East Midlands Gas Board, and that another Director, Mr. E. C. Woodall, was going to continue to give his service and experience as a member of the Eastern Gas Board, which included the Company's Norwich station and many of its other undertakings. On behalf of the stockholders he conveyed to them both their best wishes that with courage and determination they might help to develop the industry along sound and sensible lines for the welfare of millions of gas consumers.

The building in which they were assembled was going to be used by the Eastern Gas Board as its headquarters, and many of the staff so well conversant with the running of groups of large and small undertakings were likely to continue to serve the regions they knew so well. The Area Board Chairman, Sir John Stephenson, the Deputy Chairman, Mr. J. H. Dyde, and some of the senior staff, had already been found accommodation in the building for the past two weeks. Friendly co-operation always conduced to happy relations in all walks of life, and that little act of courtesy on the part of the Company had been very much appreciated by Sir John Stephenson and would, he was sure, help to ensure an easy transfer on May 1 and a continuance of the happy relations that had existed for so many years between that office and the employees at the stations and subsidiaries.

Viscount MERSEY, P.C., C.M.G., C.B.E., the Deputy Chairman, seconded, and the report and accounts were adopted.

The dividend resolutions, as indicated in the Directors' report, were carried unanimously.

The retiring Directors, Mr. F. T. BROOKES and Mr. E. C. WOODALL, were re-elected, and Messrs. Cash, Stone and Company were re-appointed Auditors.

Votes of Thanks

The CHAIRMAN proposed a vote of thanks to the officers, staff, and workmen for their services during the past year. He regretted that owing to periods of ill health during the past few months he had been prevented from carrying out his plan of making a complete tour of every undertaking to thank and bid adieu to all the employees, but during the remaining few weeks of the Company's existence he would be visiting the chief stations to present long service medals and certificates for the last time. It was perhaps appropriate and at any rate pleasant to him that he should be able to undertake that act of appreciation of good work and faithful long service, seeing that his father, as Chairman, instituted those marks of recognition in 1912. He hoped something of the sort might continue after nationalisation. Such loyal and faithful work had helped to make the gas industry reasonably free from strikes and squabbles and had enabled it to grow more and more helpful to the general public in supplying convenience and comfort both in the home and in industry.

Mr. E. C. WOODALL seconded the vote of thanks, which was carried with acclamation.

Mr. F. T. BROOKES, Director, General Manager, and Secretary, in acknowledgment, said it had always been a great pleasure to the chief official to convey to the engineers and managers the expression of thanks from the Company and the stockholders, and they had always appreciated it very greatly. On behalf of every official, every member of the staff, and every workman, he assured them that they were very grateful for the confidence which the stockholders and the Board as their representatives had placed in them. They felt they had had a most kindly Board, and they had always known that they could rely on their sympathy and understanding. They had appreciated very much the fact that when a man had been given a job to do he had been allowed to do that job in his own way, subject to general control of policy. He had been allowed to use his initiative and to do the job as he felt it should be done, and had been judged by the result, which had invariably proved the efficiency of his method. He hoped that they were not going to lose the personal contact and become over-centralised so far as responsibility was concerned. The man on the spot must be allowed to make decisions and must be given responsibility. He thanked them very much indeed for their vote of thanks and on this occasion he wanted especially to thank the Chairman and the Directors for the wonderful kindness and courtesy they had always received.

On the proposition of Mr. A. L. JANSSENS, seconded by Mr. K. R. MACKAY, a vote of thanks was accorded to the Chairman and Directors for their able management of the Company's business during the past year, to which the CHAIRMAN briefly replied.

RADIATION LIMITED

DR. HAROLD HARTLEY'S STATEMENT

THE ordinary general meeting of Radiation, Ltd., was held on Mar. 31, in London.

After paying a tribute to his predecessor, Mr. J. F. Davies, and to Sir Leonard Hill, both of whom retired on Dec. 31 last, the Chairman (Dr. HAROLD HARTLEY) said :—

The Consolidated Profit and Loss Account shows the profit of the Group for the year under review and the proposed allocation of that profit. Before taxation the profit amounts to £844,399, compared with £662,315 in the previous year. After deducting the sum of £460,076 required for taxation—and an amount of £1,392 attributable to a minority shareholder in an Overseas Subsidiary—there remains a net profit to the Group of £382,931, compared with £314,644 in 1947. To the net profit of the year is added the balance of £829,335 brought forward from 1947, making an available total of £1,212,266.

In view of the higher value of stocks at the present time, it is proposed there shall be an allocation of £110,000 to Stock Reserve. This will then be increased to £275,000, which is approximately 10% of the stock value shown in the Consolidated Balance Sheet.

The further allocations proposed are the sums required to pay the final dividend on the Preference stock, and a final dividend of 7½% on the Ordinary stock which, with the interim dividend of 5% paid in October last, will make a total dividend of 12½% on the Ordinary stock for the year.

After making these allocations from the available total there remains a balance of £910,827 which it is proposed to carry-forward. Of that balance the sum of £746,930 is retained in the accounts of the Subsidiary Companies, and £163,897 is shown in the Balance Sheet of Radiation Limited. There is thus a net increase of £81,492 in the sum carried forward as the result of the year's trading.

It may be of interest to record that during the year each £1 of sales was disbursed in the following way : Materials, power, supplies, &c., 9s. 1d. ; wages, salaries, and pensions, 7s. 9d. ; taxes, including purchase tax, 2s. 3d. ; amount retained in business, 6d. ; dividend to 11,000 Stockholders, 5d.

In the Consolidated Balance Sheet the fixed assets of the Group are shown at £2,045,462, an increase over the comparative amount in 1947 of £187,935. If we add to that figure the depreciation written off during the year, namely, £120,143, we have an amount of £308,078, which has been spent during the year on new buildings and plant. The Current Assets, less Liabilities of the Group at £4,495,593, indicate a satisfactory financial position.

Plant and Equipment

Since 1945, about £1,100,000 has been spent on replacement and installation of plant and on new buildings. In the past three years, for example, we have installed three additional mechanised foundry plants ; three continuous enamelling plants ; many new presses for our sheet metal sections, and so on. As conditions permit we intend further to modernise our factories and reorganise the manufacturing processes. As already mentioned, £308,078 was spent for this purpose last year, and the figure of £134,950 given in the Note to the Consolidated Balance Sheet, also relates to capital expenditure which comes within our programme.

Manufacturing Progress

The value in pounds sterling of our output in 1948 was the highest in the history of the Company, and it might well have been larger but for the effects of purchase tax on the sales of some of our products. Our major problem last year was how to manufacture in quantities sufficient to meet current demand for all types

of our products. Although there was a gratifying increase in output we were compelled, to our regret, to disappoint many of our customers.

We have ready for manufacture an improved gas fire—a new convector type. These fires have not been put into production because the high purchase tax would restrict sales and so increase the cost of manufacture. It would have been in the interests of fuel economy to have had the appliances available.

Further progress has been made in developing our whole-house heating equipment, and this last winter tests have been made in the two houses we have erected at Stanmore as extra-mural laboratories. These houses are of pleasing design and provide a standard of comfort which is exceptional in this country.

The ramifications of our businesses are too extensive to survey in detail now. Last year my predecessor made reference to our large cooking equipment. In this field we cater especially for hospitals, institutions, factory canteens, railways, civic restaurants, hotels, schools, and so on, both at home and abroad. With the exception of one of the war years, the output in 1948 was a record, not merely in sales value, but also when assessed on a tonnage basis. Great efforts are being made to increase the output still further.

Since the formation of Radiation Limited we have benefited from the existence of a number of manufacturing centres under unified control. It has been possible to try out new processes, new machines and building constructions at one or other of the Works before extension to the rest of the Group. The experience of our factories in the North has been available for those in the Midlands and the South, and vice versa.

Laboratory Extension

Reference was made last year to the extension of our Central Research and Development Department which was then being undertaken. The new block increases the floor area of the Central Laboratories by some 11,000 sq. ft. It is proving an advantage to have these Central Technical Sections close together. Today one of the main difficulties is to obtain the additional staff required, especially graduates in the natural sciences; this despite the wide range of interest of the work and the attractive conditions of employment which apply. There is unfortunately a real shortage of scientifically trained men in the country.

Export Section

In the pre-war years we did a useful export business with the Continent, with the Dominions and with South America. In the somewhat complex post-war conditions this has been interfered with by import restrictions, currency limitations, controls and the like. The results we are obtaining, however, are not unsatisfactory, and we are hopeful that if production can be increased in the current year we shall improve on last year's results, both with our domestic appliances and our large cooking equipment.

General Organisation

It is our endeavour to take full advantage of the ability and experience of the members of each of the associated units, and to stimulate further the spirit of co-operation. We wish to encourage and reward individuality and increase the sense of personal responsibility of each for the good name not merely of the Associated Company served, but for the Group as a whole. Growing attention is paid to the training of promising men of all grades; we are increasing steadily our employee amenities, and the Board has every intention that we shall continue in the vanguard of such progress.

In asking you to express thanks in appreciation of the generous support of all those who serve the Undertaking, I do so with all sincerity. It is difficult to overrate the sense of encouragement that derives from the support given by willing helpers.

The report was adopted.

PUBLICATIONS RECEIVED

By Way of Warning

Safety in Design and Operation of Gas Heated Ovens and Furnaces, is the title of a Memorandum issued by the Factory Department, Ministry of Labour and National Service (H.M. Stationery Office, price 6d.). The Memorandum has been prepared after consultation with the Industrial Gas Development Committee of the British Gas Council, with the Society of British Gas Industries, and with many individual manufacturers and users of gas-heated plant and safety devices.

Flame-failure devices, low pressure cut-off valves, and ventilation are the three fundamental precautions to take to avoid the accumulation of dangerous mixtures of unburnt gas or inflammable vapour and air. As well, there is the danger of gassing by the carbon monoxide in unburnt or incompletely burnt gas. The causes of 100 explosions in gas-heated plant are analysed as follows: 30 in furnaces (including annealing furnaces), 13 in conveyor ovens, 18 in box ovens, eight in box ovens fitted with mechanical recirculation systems, six in bakers' ovens, five in air heaters, eight in water heaters, and 12 miscellaneous, which include plant for purifying sulphur, degreasing and bean roasters. Fatal injuries were caused by 15, eight in natural draught box ovens.

Damage to plant and protection of workpeople can be greatly reduced by the addition of 'explosion reliefs.' The total area should be as large as possible; the standard suggested for ovens is 1 sq. ft. for each 15 cu.ft. of oven volume. Explosion reliefs should be constructed and maintained to open quickly; panels should be attached by short chains, so that, in the event of an explosion, they do not fly about. The suggested place for reliefs on ovens is the top, where the force will be directed away from workers. Oven doors should not be regarded as reliefs, but should be firmly secured on strong fastenings. Approximately two-thirds of the explosions analysed occurred during lighting-up operations.

Coal—Production, Distribution, Utilisation*

At the end of the war in 1945, the Coal Industry Society and the Institute of Fuel arranged to collaborate in preparing a new book, entitled 'Coal—Production, Distribution, Utilisation.' This book, now published for the two organisations by Industrial Newspapers, Ltd., is not a revision of a similar book produced by those organisations in 1931; though similar in layout, the whole of the contents have been rewritten by a team of authors, each one of whom is an acknowledged authority in his own branch of the industry.

The book, which has a prefatory note by Lord Hyndley (Chairman of the National Coal Board) and Dr. D. T. A. Townend (President of the Institute of Fuel), is designed to provide a survey of the processes involved from the 'getting' of the coal in the mine to its use as solid fuel or as electricity or gas.

The book seeks to meet the needs of those who are training for positions in the industry—whether in mining, administration, distribution, or utilisation—and also of business people and the public generally.

The formation, composition, and classification of coal have been dealt with on broad lines followed by a description of the coalfields of Great Britain, which brings out the wide variety of different types of coal that are available and produced. A considerable amount of information is given on the uses to which these coals can best be put.

The chapters on the mining of coal and its preparation for the market deal with the more technical aspects of the subject, but all the technical terms have been explained and the reader is given a clear idea of the fundamentals involved and the practical methods and processes that have been developed.

The chapters on the distribution and storage of coal include details of the quantities of coal that are handled, and technicalities such as stemming, chartering, and marine insurance are explained. Diagrams are included in the chapter on rail transport which show how the immense coal traffic to London is dealt with. The handling of coal at large depôts is described in connection with road delivery by petrol-driven and electrically-driven vehicles. Storage of coal is treated from a practical point of view and the best-known precautions against spontaneous combustion and deterioration are given in the form of recommendations for the layout and handling of dumps.

A new chapter on the analysis of coal is an addition. Since the whole value of analysis turns on correct sampling, the author has, first of all, given guidance on this point. The methods of carrying out proximate and ultimate analyses as well as many other analyses are described, without entering into detail. The reader is also given some indication of the ranges of results that may be obtained with average British coals.

The second half of the book is concerned with various aspects of the utilisation of coal. There are six separate chapters covering steam raising, carbonisation, oils and chemicals from coal, and domestic utilisation as solid fuel, gas, and electricity.

The book, which is amply illustrated, has been edited by Mr. P. C. Pope, and a useful subject index has been included.

Copies may be obtained from the Publishers, Industrial Newspapers, Ltd., the Coal Industry Society, the Institute of Fuel, or through any bookseller.

* Published for the Coal Industry Society and the Institute of Fuel, by Industrial Newspapers, Ltd., 49, Wellington Street, Strand, London, W.C.2 (price 12s. 6d., postage and packing extra).

In last week's issue, p. 710, the address of Whessoe, Ltd., was given as 21, Victoria Street, S.W.1. This should read 25, Victoria Street, S.W.1.

GAS STOCKS AND SHARES

A new three-week account covering Budget Day and the Easter holidays opened on Wednesday, and the total dealings on the London Stock Exchange for the week ended Thursday evening fell short by about 1,000 of the 32,741 recorded in the previous week. Reduced business in the early part of the week gave way to brisker activity and hopes of taxation relief in the Budget stimulated buying in those fields most likely to be affected. British funds ended the week at an average of 113.74, against 113.63 for the previous week, and the industrial index rose from 112.4 to 114.6.

Business remained steady in the gas stock market, with a total of 230 bargains against 225 in the previous week. Most companies have now held their last annual meetings and many of them have announced dividends at proportionately standard rates for the four months from Jan. 1 to vesting day under the Gas Act. Very few price changes occurred during the week. Chester rose from 106-111 to 109-114 (compared with a calculated compensation value of 114½) and the other changes bore similar relationships to compensation values. The week's increases were as follows:

OFFICIAL LIST

Chester United, ord. ...	109 —114	+	3
Commercial, 5 p.c. irred. deb. ...	108 —113	+	1
Primitiva Holdings, Ltd., ord. ...	7/6 — 9/6	+	6d.
South Eastern Gas Corp., ord. ...	22/ — 23/	+	3d.
Watford & St. Albans, ord. ...	96 —101	+	2

Quotations on the London Stock Exchange

When last ex-Dividend	Dividends Interest. Total for Year %	NAME.	Quotations Mar. 31
Mar. 2	4	Alliance & Dublin Cons. Ord.	21/6—23/6
Mar. 30	5	Asscd. Gas & Water U'd'tgs Ord. ...	22/ —23/
,,	6	Do. Deferred	22/6—23/6xd
,,	4½	Do. 4½ p.c. Red. Cum. Pref....	20/ —21/xd
,,	4	Do. 4 p.c. Red. Cum. Pref. ...	19/ —20/xd
,,	4	Do. 4 p.c. Irred. Cum. Pref....	18/3—19/3xd
Mar. 2	7	Barnet Ord. 7 p.c. max.	151—156
Mar. 16	5	Bath Cons. Ord. 5 p.c. basic ...	103—108
Feb. 16	6½	Bombay, Ltd., Stock	34/- -39/-
Mar. 2	8½	Bournemouth Std. 5 p.c. sliding scale	160—165
,,	7	Do. 7 p.c. max. div.	150—155
,,	4	Do. 4 p.c. Pref.	96—101
,,	6	Do. 6 p.c. Pref.	124—129
Feb. 2	3½	Do. 3½ p.c. Red. Deb.	95—100
Dec. 15	4	Do. Perp. 4 p.c. Deb.	96—101
Mar. 2	5·35	Brighton, &c., 5 p.c. Std. Cons. ...	103—108
,,	6·3	Do. 6 p.c. Std. Cons.	113—118
Dec. 15	5	Do. 5 p.c. Perp. Deb.	118—123
Mar. 2	5	Bristol, Gen. Cap. 5 p.c. max. ...	112—117
Dec. 15	4	Do. 4 p.c. New Deb. Red. ...	94— 99
Mar. 16	7½	Brit. Gas Light Ord.	127—132
Jan. 5	5½	Do. 5½ p.c. 'B' Cum. Pref. ...	108—113
Dec. 15	4	Do. 4 p.c. Red. Deb.	93— 98
Feb. 16	10	Cambridge U. & T. Orig. 10 p.c. Cons. ...	190—200
,,	5	Do. 5 p.c. Cons. 'C'	95—100
,,	7	Do. 7 p.c. Cons. 'B.'	135—140
Nov. 3	4½	Cape Town, Ltd., 4½ p.c. Cu. Pf. ...	17/ —19/
Feb. 16	7½	Cardiff Con. Ord.	118—123
Mar. 30	5	Cheltenham, 5 p.c. basic Cons. Ord. ...	104—109xd
Dec. 15	4	Do. 4 p.c. Perp. Deb.	94— 99
Feb. 2	5½	Chester United Ord.	109—114
Nov. 3	7	Colombo Ltd., Ord.	27/ —32/
,,	7	Do. 7 p.c. Pref.	22/ —24/
Sept. 29	5	Colonial Gas Assn. Ltd. Ord. ...	14/ —16/
,,	8	Do. 8 p.c. Pref....	22/ —25/
Feb. 2	5	Commercial Ord.	90— 95
Dec. 1	3	Do. 3 p.c. Deb. Perp.... ...	72— 77
Feb. 16	5	Do. 5 p.c. irred. Deb.... ...	108—113
,,	6	Croydon sliding scale	120—125
,,	5	Do. max. div.	102—107
,,	4	Do. 4 p.c. irred. Pref.	95—100
Dec. 15	4	Do. 4 p.c. Perp. Deb.... ...	94— 99
,,	5	Do. 5 p.c. Perp. Deb.... ...	119—124
Feb. 16	8	Derby Cons. Ord.	134—139
Dec. 15	4	Do. 4 p.c. Red. Deb.	92— 97
Mar. 2	5	East Hull Ord.	96—101
Feb. 16	5	East Surrey 'B,' 5 p.c.	98—103
,,	6	Do. 6 p.c. Cum. Pref.... ...	116—121
Dec. 15	5	Do. 5 p.c. Irred. Deb.	117—122
Feb. 16	6⅝	East Wight Cons. Ord.	107—112
Mar. 2	5	Eastbourne 'A'	101—106
,,	3½	Do. 'B'	98—103
Nov. 17	5	Gas Consolidation Ord. 'A' ...	21/ —23/
,,	5	Do. Ord. 'B'	21/ —23/
,,	4	Do. 4 p.c. Red. Cum. Pref.	17/6—19/6
Feb. 2	5	Gas Light & Coke Ord.	22/9—23/9
,,	3½	Do. 3½ p.c. max.	78¼— 81½
,,	4	Do. 4 p.c. Con. Pref.	98½—101½
,,	3½	Do. 3½ p.c. Red. Pref.... ...	97— 100
Jan. 5	3½	Do. 3 p.c. Con. Deb.	86— 89
Dec. 1	3	Do. 5 p.c. Deb.	104—107
,,	5	Do. 4½ p.c. Red. Deb.	104—107
,,	4½	Do. 3½ p.c. Red. Deb.... ...	94— 99
Mar. 16	3½	Gloucester Cons. Ord.	94— 99
,,	5	Great Yarmouth (8½ p.c. max)	13½—14½
Feb. 16	4	Guildford Cons. Ord.	132—137
,,	7½	Hampton C't, 5 p.c. Cons. Ord.	95—100
Mar. 2	5½	Hartlepool G. & W. 5 p.c. Ord.	93— 98
Feb. 16	5	Hastings & St. L. (5 p.c. Std.)	100—105xd
Mar. 30	6	Do. (3½ p.c. Std.)	87— 92xd
,,	5	Holyhead & N. Wales Ord.	20/6—22/6
June 16	7½	Hornsey 3½ p.c. Std.	89— 94
Sept. 15	5	Do. 5 p.c. Std	110—115
,,	6⅞	Imperial Continental Cap.	100—105
May 19	8½	Lea Bridge Co., Cons. Ord....	134—139
Sept. 1	7⅜	Liverpool 5 p.c. Ord.	120—125
Feb. 2	5⅜	Luton Cons. Ord. 'A'	152—157
Mar. 16	7⅜	Do. Ord. 'B'	115—120
,,	6½		

When last ex-Dividend	Dividends Interest. Total for Year %	NAME.	Quotations Mar. 31
Jan. 5	8	Malta & Med'n., ord.	160—170
,,	7	Do. 7 p.c. 1st Pref.	110—115
,,	7½	Do. 7½ p.c. 2nd. Pref....	110—115
Feb. ,, 16	5.5.0	M.S. Utility 'A' Cons.	101—106
,,	3.2.0	Do. 'B' Cons.	70— 75
,,	5	Do. 'C' Cons.	102—107
,,	4	Do. 4 p.c. Cons. Pref.	96 —101
May ,, 19	2	Montevideo, Ltd. Ord.	90—100
Feb. 2	5⅜	Newcastle and Gateshead Ord.	24/9—25/9
Jan. 5	3½	Do. 3½ p.c. Perp. Deb.	93— 98
Mar. 16	8½	Newport (Mon.) Cons.	98—103
Dec. 15	5	Do. 5 p.c. Perp. Deb.... ...	110—115
Sept. 29	6½	North Middlesex 6 p.c.	123—128
,,	5	Do. 5 p.c. Pref.	105—110
Feb. ,, 16	5	Northampton Cons.	104—109
Mar. 30	9	Oxford, Cons. Ord.	202—212xd
Dec. 1	5⅜	Plymouth & Stonehouse Ord	111—116
,,	8½	Do. Addl.	14½— 15½
,,	7½	Do. New	13½— 14½
Mar. 2	5	Do. 5 p.c. Deb. Perp....	118—123
Feb. 16	7½	Portsmouth & Gosport Cons.	146—151
,,	5	Do. 5 p.c. max.	101—106
,,	10	Preston 'A'	178—183
,,	7	Do. 'B'	125—130
June 24	46 2	Primitiva Holdings, Ltd. Ord.	7/6 — 9/6
Dec. 15	6	Do. 6½ p.c. Red. Cum. Pref.	97—102
Feb. 16	5	Reading, 5 p.c. max.	97—102
,,	3¾	Do. 3¾ p.c. Red. (Non-Cum.) Pref....	96— 101
Dec. 15	4	Do. 4 p.c. Perp. Deb....	91— 96
Feb. 16	5	Romford, Ord.	111—116
Sept. 15	7½	Severn Val. Ltd. Ord.	22/6—23/6
Mar. 16	4½	Do. 4½ p.c. Cum. Pref.	20/6—21/6
Mar. 2	6½	Sheffield Cons....	143—148
Jan. 5	4	Do. 4 p.c. Red. Deb.	93— 98
Mar. 2	6	South East'n Gas Ltd. Ord.	22/ —23/
,,	4½	Do. 4½ p.c. Red. Cum. Pref.	21/ —22/
,,	4	Do. 4 p.c. Irred. Cum. Pref.	19/—20/-
Feb. ,, 16	5	South Metropolitan Ord.	100 —105
,,	6	Do. 6 p.c. Irred. Pref....	123 —128
,,	4	Do. 4 p.c. Irred. Pref.	97 —102
Dec. 15	3	Do. 3 p.c. Perp. Deb.	82 — 87
Jan. 5	5	Do. 5 p.c. Red. Deb.	97 —102
Feb. 16	5	South Suburban Ord. 5 p.c.	113 —118
,,	5	Do. 5 p.c. Perp. Pref....	108 —113
,,	4	Do. 4 p.c. Perp. Pref....	93 — 98
,,	3½	Do. 3½ p.c. Red. Pref....	90 — 95
,,	5	Do. 5 p.c. Perp. Deb....	118— 123
Dec. 15	5	South West. G. & W. Ltd. Ord.	19/—21/-
Sept. 15	5½	Southampton Ord.	102 —107
Feb. 2	5	Sunderland Ord.	112 —117
,,	6	Swansea Ord.	82 — 87
,,	4½	Do. 5½ p.c. Red. Pref.	100 —105
,,	5½	Swindon Cons. Ord.	114 —119
Mar. 16	7	Tottenham Ord.	116 —121
Mar. 2	5	Do. 5 p.c. Pref.	107 —112
,,	5	Do. 5½ p.c. Irred. Pref.	120 —125
,,	5½	Do. 4 p.c. Perp. Deb....	95 —100
Dec. 15	4	Tunbridge Wells, 4 p.c. Sliding	122 —127
Oct. 13	6.85	U. Kingdom Ltd. Ord.	23/ -24/
,,	7	Do. 4½ p.c. 1st Cum. Pref.	22/3—23/3
Nov. 17	4½	Do. 4 p.c. 1st Red. Cum. Pref.... ...	19/ —20/
,,	4	Do. 4½ p.c. 2nd Non. Cum. Pf.... ...	19/ —20/
Jan. 5	4½	Do. 3½ p.c. Red. Deb....	93 — ⅞8
Mar. 16	3½	Uxbridge, &c., 5 p.c. Cap.	120 —125
Aug. 18	6⅝	Do. 5 p.c. Pref.	107 —112
,,	5	Do. 5 p.c. Perp. Deb.	118 —123
Dec. 1	5	Wandsworth Cons.	118 —123
Feb. 16	5	Do. 4 p.c. Pref....	97 —102
,,	4	Do. 5 p.c. Irred. Deb....	121 —126
Dec. 15	5	Do. 4 p.c. Irred. Deb....	96 —101
,,	4	Watford & St. Albans Ord.	117 —122
Feb. 2	5	Do. 5 p.c. Pref.	107 —112
,,	5	Do. 5½ p.c. Pref.	120 —125
,,	5½	Weymouth Ord. (5 p.c. Basic)	92 — 97
Feb. 16	5	Woking District "A" Ord....	180 —190
,,	10½	Do. "B" Ord....	127 —132
,,	7.35	Wolverhampton Cons. Ord.	119 —124
,,	7½	York Cons. Ord.	98 —103
Mar. 16	5		

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GAS UNDERTAKINGS' RESULTS

Stirling Gas Light Company

Sales of gas for the year ended Dec. 31 reached a record total of 408 mill. cu.ft. After payment of a dividend for the year on Consolidated Preference stock and an interim Ordinary dividend, there is a balance of £10,215. Payment of a final dividend at 4¼%, less tax, on the Consolidated Ordinary stock leaves a sum of £7,704 to be carried forward, compared with £5,056 brought in.

Bedford District Gas Company.

Profit for 1948, after depreciation, is £8,862, to which is added loan and investment interest, transfer from tax account, sale of wagons, and £8,780 brought in, making a total of £30,157. After deduction of interest charges, transfer of £1,286 to capital account re wagon sales, and Preference dividend, payment of a final Ordinary dividend at 2½%, making 5% for the year, and co-partnership bonus leaves £7,632 to be carried forward.

Bristol Gas Company

Gas sold in 1948 was 5,474,649,215 cu.ft., compared with 5,439 mill. cu.ft. in the previous year, setting up a new record for the Company. Income from gas sales was £1,433,322, against £1,310,783, and the balance carried to net revenue account was £300,994, against £149,540. Dividend is maintained at 5%, leaving a carry-forward of £116,423, against £85,445 brought in. Commitments to the value of £1,204,872 have been entered into in respect of contracts for the provision of new gas making and ancillary plant at Stapleton Road works.

Kidderminster Gas Company

Revenue from sales and other sources for the year ended Dec. 31 is £125,569. To manufacture £91,940, management £5,710, distribution £18,786, rates and taxes £3,148, and insurance, &c., £2,560, leaving a profit, plus interest, of £3,470. After providing for debenture interest and Preference dividend, there is a balance of £5,383 to be carried forward. In view of substantial profit and loss balance and reserve funds, the Directors propose to make pro rata payment on April 30 of interest, less tax, on debenture stock covering the period to that date from Jan. 1, and to pay interim dividends at £1 13s. 4d.% on both 5% Preference and Consolidated Ordinary stocks.

Colonial Gas Association

At a recent meeting of the Directors an interim Ordinary dividend of 5% was declared for the half-year ended Dec. 31, 1948, less income tax and deduction for rate of exchange.

Wellington (Salop) Gas Company.

For the year ended Dec. 31 a sum of £28,360 is available. After deducting interest charges, Preference dividend, and Preference issue expenses, payment of a final Ordinary dividend at 3½%, making 7% for the year, leaves £13,399 to be carried forward, compared with £7,664 brought in.

Isle of Thanet Gas Light and Coke Company

Gas sales in 1948 reached a record total of 539.6 mill. cu.ft., as compared with 525 mill. cu.ft. in 1947. Increases in the costs of coal, wages and materials necessitated an increase in the price of gas from 12d. to 13.2d. per therm as from the September quarter, 1948. The balance of net profit for the year, after providing for debenture and other interest on loans, interim dividend and fixed charges, amounted to £7,055. A final dividend of 2½% makes 5% for the year.

Dudley, Brierley Hill, and District Gas Company.

It was stated at the annual meeting that the total sales of 1,097 mill. cu.ft. for the year ended Dec. 31 were a record and an increase of over 65% on the last pre-war year. In spite of further heavy increases in the prime costs of coal and rates of wages and salaries, which were not completely offset by an increase in the price of gas at the beginning of the year, the revenue account shows a gross profit of £21,934, compared with £24,812 for 1947 After meeting all charges, making depreciation allowances, full contribution to renewals funds, and allowing for the payment of dividends, there would normally have been a sum of £31,669 to carry forward, against £30,946 for the previous year. In addition, however, there has been brought into the account £11,800 War Damage contributions and £34,000 taxation reserve, making a total of £77,499 to be carried forward. Extensions of gas-making plant have been delayed and will not be completed until the end of the year. Meanwhile, orders for gas, equal to over 60% of the year's output, remain unfulfilled.

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